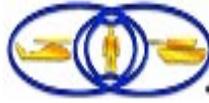


Directorate of Public Safety News Letter

1 July, 02



Thunderstorm & Lightning Safety

WHAT YOU CAN DO!

Before the Storm...

- Know the names of nearby county and major cities. Severe weather warnings are issued on a county or city basis.
- Check the weather forecast before leaving for extended periods outdoors.
- Watch for signs of approaching storms.
- If a storm is approaching, keep a NOAA Weather Radio or AM/FM radio with you.
- Postpone outdoor activities if thunderstorms are imminent. This is your best way to avoid being caught in a dangerous situation.
- Check on those who have trouble taking shelter if severe weather threatens.

When Thunderstorms Approach...

- Remember: if you can hear thunder, you are close enough to the storm to be struck by lightning. Go to safe shelter immediately!
- Move to a sturdy building or car. Do not take shelter in small sheds, under isolated trees, or in convertible automobiles.
- If lightning is occurring and a sturdy shelter is not available, get inside a hard top automobile and keep windows up.
- Get out of boats and away from water.

- Telephone lines and metal pipes can conduct electricity. Unplug appliances not necessary for obtaining weather information. Avoid using the telephone or any electrical appliances. Use phones ONLY in an emergency.
- Do not take a bath or shower.
- Turn off air conditioners. Power surges from lightning can overload the compressors.
- Get to higher ground if flash flooding or flooding is possible. Once flooding begins, abandon cars and climb to higher ground. Do not attempt to drive to safety. Note: Most flash flood deaths occur in automobiles.

If Caught Outdoors and No Shelter Is Nearby...

- Find a low spot away from trees, fences, and poles. Make sure the place you pick is not subject to flooding.
- If you are in the woods, take shelter under the shorter trees.
- If you feel your skin tingle or your hair stand on end, squat low to the ground on the balls of your feet. Place your hands on your knees with your head between them. Make yourself the smallest target possible, and minimize your contact with the ground.
- If you are boating or swimming, get to land and find shelter immediately!

**Make This Summer a Safe Fun Time
for You and Your Family.**

DIRECTORATE OF PUBLIC SAFETY NEWS

Fireworks are Illegal in New Jersey

The Fourth of July is a special time of year. All across the America, families and friends come together to enjoy the warm weather and to celebrate our nation's independence. Just as sure as fireworks will fly on the Fourth of July, news will be reported on July 5 that won't be as pleasant. Someone, somewhere, will be injured, or worse, in a fireworks accident. It happens every year.

The federal government's Consumer Products Safety Commission estimates that emergency rooms treated 8,500 fireworks injuries last year, about 40 percent of them suffered by children and teens under 15.

Injuries

The U.S. Consumer Product Safety Commission (CPSC) monitors a sample of hospital rooms and produces annual injury estimates associated with a number of consumer products based upon the injuries that are recorded on these

selected hospitals. Using this data, CPSC estimates that 7,000 people were treated for fireworks-related injuries in 1998. This is down from an estimated 8,300 in 1997. CPSC emphasizes that estimates are based on injuries relating to fireworks, but it is incorrect to say that injuries were caused by the product. Also, the figure covers injury reports associated with all types of fireworks, including accidents involving homemade items and large, illegal explosive devices.

In 1976, CPSC enacted national standards for family-type fireworks in response to a petition calling on CPSC to ban all fireworks except for licensed public displays. All fireworks now legally available for sale to consumers must comply with the CPSC rules. Since the adoption of these regulations, the amount of fireworks used each year has doubled, suggesting that the injury rate in terms of injuries per one million pounds of fireworks ignited has declined significantly.

Illegal fireworks continue to be a serious problem. Over the past 10 years, 30-33 percent of the injuries associated with fireworks have

typically been caused by illegal explosives or homemade fireworks.

Information from N.J. Statutes pertaining to explosives and fireworks

21:3-1. Sale, use, etc., declared against public health, safety and welfare. The sale, exposure for sale, use, distribution or possession of fireworks or pyrotechnics in the state of New Jersey, except as hereinafter provided, is hereby declared by the legislature to be against the public health, safety and welfare of the people of the state of New Jersey.

21:3-2. It shall be unlawful for any person to offer for sale, expose for sale, sell, possess or use, or explode any blank cartridge, toy pistol, toy cannon, toy cane or toy gun in which explosives are used; the type of balloon which requires fire underneath to propel the same; firecrackers; torpedoes; skyrockets, Roman candles, bombs, sparklers or other fireworks of like construction, or any fireworks containing any explosive or inflammable compound or any tablets or other device commonly used and sold as fireworks containing nitrates, chlorates, oxalates, sulfides of lead, barium, antimony, arsenic, mercury, nitroglycerine, phosphorus or any compound containing any of the same or other explosives, or any substance or combination of substances, or article prepared for the purpose of producing a visible or an audible effect by combustion, explosion, deflagration or detonation, other than aviation and railroad signal light flares.

o "Fireworks" include any combustible or explosive composition, or any substance or combination of substances, or article prepared for the purpose of producing a visible or an audible effect by combustion, explosion, deflagration or detonation.

o It shall be unlawful to manufacture, sell, transport or use dangerous fireworks within the state.

o A person shall not knowingly deliver fireworks to a person within this State unless the person to whom delivery is to be made is named on a

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valid permit obtained pursuant to R.S.21:3-1 et seq.

o Web site with N.J. Statutes pertaining to explosives and fireworks is www.njleg.nj.us

In the Surf and On The Beach

Waves

Far out at sea, strong winds blow on the water, creating ocean swells. These swells travel great Distances until they strike the shallow coastline and become powerful, breaking waves.

Side Current

When waves break at an angle to the shoreline, they push water sideways, forming a current that moves parallel to the beach. This is called a side current.

Hazards

Breaking waves and moving water create various hazardous bottom conditions. These include channels, holes, and sandbars. Holes and channels can be extremely dangerous for small children, especially at high tide.

Beach and Ocean Safety Tips

- Always swim near a staffed lifeguard tower, and never swim alone.
- Check with a lifeguard about surf and beach conditions before going in the water. Obey warning signs in dangerous areas.
- Don't over estimate your swimming ability. Never depend on a floatation device or a leash for your safety.
- Always swim or surf in designated areas. Stay away from loose surfboards.
- A rip current can pull you off shore. If you should be caught in a rip current –DO NOT PANIC – Relax and swim parallel to shore in the same direction as the side current.
- Call and wave for help if you really need it. Never fake signals or calls for help.
- Don't dive into unknown water or into shallow breaking waves.
- Be aware of the direction and strength of the side current.
- Keep a safe distance away from jetties and piers.
- Never throw sand for any reason.

- Never bury any part of your body in the sand and refill any holes you dig in the sand.
- Build fires only in fire rings (where allowed) and NEVER put them out with sand – always use water.
- Don't bring glass to the beach.

- Please do not litter. Leave the beach cleaner than you found it.
 - Avoid stingrays by shuffling your feet along the bottom.
 - Inshore holes are very dangerous for small children. Never allow small children to play near the waterline unsupervised.
 - Protect yourself from the sun. Use sunscreen and wear a hat.
-

Tire Sealants – A Bomb Looking for an Ignition Source

Consumers generally do not pay attention to the contents of consumer products; they assume that if an item is sold for a purpose, the item is safe when used for that purpose. Unfortunately, this is not true, and what you don't know can hurt you. Would you inflate your tires with propane? Although most people would answer, "*are you crazy, of course not*", these same people are routinely inflating their tires with so-called "tire sealants" that are nothing but propane and perhaps a little isobutane. There are two kinds of tire sealants sold in aerosol cans: those \$5 to \$10 brands that are likely to be non-flammable and contain latex sealant, and those \$1 to \$2 brands that contain propane, are flammable and contain no real sealant.

Injuries have occurred from the use of these inexpensive "sealants." Two injuries we are aware of resulted from tire repairmen attempting on-the-wheel plug repairs. In each case a reamer was inserted into the tire puncture, and the tire exploded. The tire obviously contained an explosive mixture and only needed an ignition source. It is likely that sparks resulting from the reamer contacting steel belts provided the ignition source.

A scientific look at such a tire explosion provides some interesting and surprising revelations; but first,

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we need to understand the concept of flammable limits:

Flammability Limits (Explosive Limits) are the minimum and maximum concentrations (in air) of a flammable gas or vapor between which ignition can occur. Concentrations below the lower explosive limit (LEL) are too lean to burn, while concentrations

above the upper explosive limit (UEL) are too rich. All concentrations between the LEL and UEL are in the explosive range, and special precautions are required to prevent explosion or ignition. The LEL and UEL are also known as LFL and UFL (lower and upper flammable limits.) The UEL for both propane and isobutane is 9.5 volume %. The LEL for propane is 2.1% and for isobutane is 1.4%. If we had 100 cubic feet of an air/propane/isobutane mixture, there would be 9.5 cubic feet of propane/isobutane at the UEL.

If your automobile tire was at 15 pounds pressure (psig) and you repressured the tire to 30 psig with propane (the case is identical with isobutane), the mixture in the tire would be about 33% propane. As you can see, this is well above the UEL for propane. This case likely illustrates why there aren't daily incidents and injuries involving propane/isobutane based "tire sealants." In most cases, when the tire is inflated with the sealant, the concentration of flammable gas is significantly above the UEL. If the tire was completely flat and inflated to 30 psig, the propane concentration would be about 66%.

Now let's look at the case where the tire is slightly low and filled to the desired pressure with "tire sealant." Assume the initial tire pressure is 26 psig and the desired 30 psig is attained by adding "sealant". The propane concentration would be 8.8%!!! Oops, we now have a flammable mixture.

So, with the flammable tire sealants, more sealant is better than less sealant. If the mixture in the tire is above the UEL and is vented into the air so that it can mix with more air, it will burn if ignited. But, the mixture in the tire will not explode.

A more likely and quite insidious case is when a tire contains flammable "sealant" above the UEL; the tire continues to leak; and the tire is then reinflated with air. If a tire at 15 psig is inflated to 30 psig with

"sealant", the propane concentration would be 33% (this is the first case discussed). Now assume the tire leaks to 15 psig and is reinflated with air. The propane concentration would then be 22%. If the tire leaks to 15 psig and again is inflated to 30 psig with air, the propane concentration would be 14.8%. A

third, similar, repressure with air would result in a propane concentration of 9.8%, essentially the UEL of propane. A fourth, similar, repressure with air would result in a propane concentration of 6.6%, still in the flammable range. A fifth repressure would result in 4.4% propane, still within the flammable range. A sixth repressure would result in 2.9% propane, still in the flammable range. A seventh repressure would finally decrease the propane concentration below the LEL.

In conclusion:

1. Flammable tire sealants are dangerous.
2. Never attempt an on-the-wheel tire repair.
3. Never put a small amount of flammable sealant in a tire. More is better than less.
4. Always inform the tire repair technician when a tire contains a "tire sealant."
5. Never use air to reinflate a tire that contains a "tire sealant". It is safer to use more sealant.
6. Have leaking tires repaired immediately.
7. Realize that a flammable gas concentration between the UEL and LEL is a bomb looking for an ignition source.

The Houston Chronicle reported that Houston-based Pennzoil-Quaker State Co. issued a voluntary recall of all its Fix-A-Flat tire inflator products, saying unsafe repair practices could cause explosions. According to the article, there have been six explosions involving welding of rims holding tires believed to contain Fix-A-Flat propellant. Some 30 million cans have been sold since 1996 alone. The incidents resulted in five injuries and one death.

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<u>Installation Safety Office</u>	<u>562-2900</u>
<u>Fire Prevention Bureau</u>	<u>562-5484</u>
<u>DOD Police</u>	<u>562-6001</u>

FOR AN EMERGENCY DIAL 9-1-1

Keep Your Distance

Ever notice how people seem to be compelled to follow too closely while driving, especially on the freeway. If you've ever driven the I-15 between Vegas and LA, you know exactly what I mean. Try as you might, it's virtually impossible to get any semblance of a safe buffer zone in front of you without three knot-heads coming around you and stuffing their vehicles into it. I'm convinced it's human nature...we don't want the world "passing us by"...or to be "left in the dust"...we want to be "where the action is". It seems we're just compelled to follow too close (or tailgate). Unfortunately, this element of our nature can (and very often does) result in anything from fender-benders to high-speed chain reaction pile-ups on the freeway.

How close is too close? One vehicle length for each 10mph is a commonly quoted rule of thumb. A two to three second time gap (or upwards of six seconds if you're driving heavy equipment) between you and the vehicle in front is another way of gauging proper following distance. Bad weather and slick roads demand greater following distance (one source I researched quoted nine seconds as a starting point for such conditions). The important thing to remember is that dangerous situations can develop up ahead on the road mighty fast, and not tailgating leaves you space and time to avoid them. Also keep in mind the capabilities of the vehicle you're driving and adjust accordingly.

Think about this analogy which sort of tidies up the relationship between increasing speed and distance... Hold two golf balls over the edge of a really high bridge. Drop one ball. Two seconds later, drop the other one (this will start it out 64 feet behind the first ball). After a ten second fall (I did say a *high* bridge, didn't I?), the speed of our falling objects will be well over 200mph**, and the distance between the two golf balls will have opened to 704 feet. But the *time gap* will be the same two seconds that initially

separated them. Which means that exactly two seconds after the first ball meets its fate at the bottom of our imaginary chasm, so will the second one. So I ask you, if two inanimate objects have the common sense to maintain a two second gap, why should it be so difficult for most drivers?

...Think about it.

*** (For you physic whiz kids, such pesky encumbrances as wind resistance and terminal velocity were ignored for simplicities sake.)*

**Low to Extremely High Risk
Can be:
only a matter of inches...**



Manage Risk Daily

IDIOTS

Idiot #1

A medical student was doing a rotation in toxicology at the poison control center when a woman called-in very upset because she caught her little daughter eating ants.

The medical student reassured her that the ants are not harmful and there would be no need to bring her daughter into the hospital. She calmed down, and at the end of the conversation happened to mention that she gave her daughter some ant poison to eat to kill the ants. She was told that she should bring her daughter into the Emergency Room right away.

Idiot #2

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Ann Arbor: The Ann Arbor News crime column reported that a man walked into a Burger King in Ypsilanti, Michigan at 12:50 am flashed a gun and demanded cash. The clerk turned him down because he said he couldn't open the cash register without a food order. When the man ordered onion rings, the clerk said they weren't available for breakfast. The man, frustrated, walked away.