November

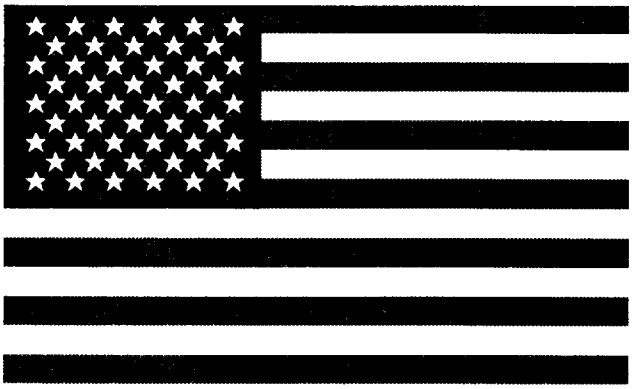
Veterans Day Safety

Competitive Sports Safety

Cold Weather Vehicle Maintenance Check

Thanksgiving Holiday Safety

Chemical Safety



VETERAN'S DAY

MESSAGE

Our freedom and country were purchased at great cost to those who serve, now and in the past, both in war and peacetime. The lifestyle to which we have grown accustomed, the freedoms we enjoy, the bounties with which we are familiar can all be attributed to those brave defenders who gave their lives for this nation.

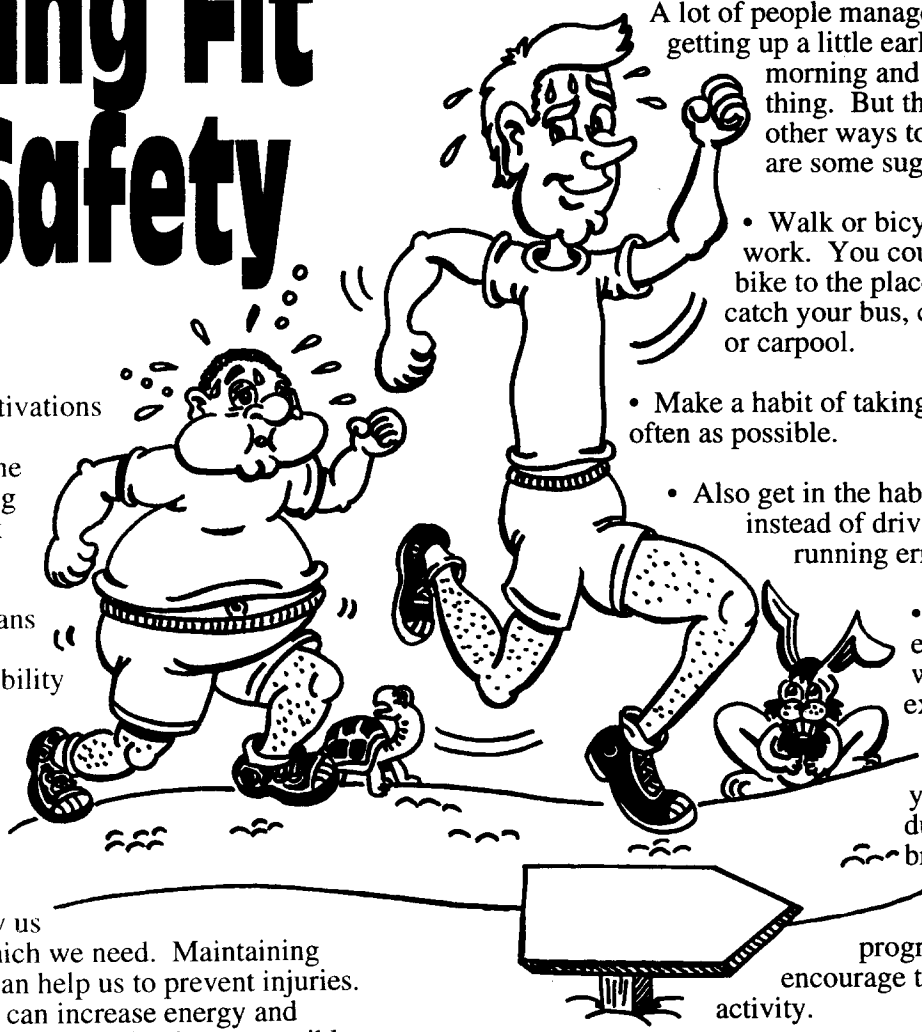
We are about to take a break away from our routine work week to celebrate Veterans Day. Accident statistics for long weekends provide us with experiences from which we can all learn. The most significant repeated lesson learned is that automobiles become deadly, comparable to an aimed and loaded gun, when driven by a drunk driver. During holidays, traffic accidents increase as do personal injuries and property damage. More of us are finding the hard way that drunk driving tragedy does not always happen to someone else. Much truth is realized in the basic message that drinking, drugs and driving do not mix.

So, just as our predecessors mustered cannon balls for freedom, we need to muster common sense for responsible, drink and drug free, safe driving.

by:
Susie Ashby
Installation Safety Division

©1994 Bongarde Communications Ltd.

Staying Fit For Safety



There are many motivations for maintaining physical fitness. One of them is improving your ability to work safely.

Physical fitness means having the strength, endurance and flexibility to deal with the things which we encounter in our lives each day. It involves keeping our heart and lungs functioning well so that they can supply us with the oxygen which we need. Maintaining muscular strength can help us to prevent injuries. Maintaining fitness can increase energy and endurance to allow us to remain alert to possible dangers on the job.

Even if you work at a physically demanding job, it is important that you have a regular exercise program. Even a job involving tasks such as heavy lifting or walking will not provide all of the right kinds of exercises to maintain good fitness.

Probably the last thing you want to do at the end of a day's work is to work some more — in the form of exercise. But in the long run it can help you to work better and even more safely.

It can be a real trick to fit exercise into a schedule which is already too busy. But it can be done. The best way is to work exercise into your daily routine.

A lot of people manage to exercise by getting up a little earlier in the morning and exercising first thing. But there are many other ways to fit it in. Here are some suggestions:

- Walk or bicycle to or from work. You could also walk or bike to the place where you catch your bus, commuter train or carpool.
- Make a habit of taking the stairs as often as possible.
- Also get in the habit of walking instead of driving when you are running errands.
- Do stretching exercises and warm-up exercises right at your work station before your shift and during short breaks. Many workplaces have exercise programs which encourage this type of activity.
- On your lunch break, maybe you can fit in a quick walk, run, swim or other workout.
- Make exercise part of your social and family life by having some active fun with friends and family members.
- Join a community recreation center or a gym. Some companies have fitness incentive programs to help with this.

Some of the benefits of exercise include being stronger and more flexible. You'll probably have a more healthy appetite and sleep better. You might just generally feel better. Also, your better physical condition might give you an extra edge in avoiding accidents and injuries.

The information presented in Copy Ready! has been compiled from various sources which are believed to be reliable. However, it cannot be assumed that all acceptable measures are contained in this article nor that additional measures may not be required under particular or exceptional circumstances, or your own company procedures, or by federal, state/provincial and local law. ***Copy Ready! is intended for in-house use only — commercial reproduction is a violation of our copyright agreement.*** *For a complete catalog of Bongarde Communications Ltd. products please call 1-800-667-9300.*

SPORTS AND RECREATION BRIEFING

1. **General Sports and Recreation Safety Briefing.**

All sports contain an element of danger because sports activity involves a great deal of personal exertion, quick decisions followed by fast action, and often some physical contact. Although some mishaps may be unavoidable, most sports injuries can be prevented. They can be prevented if you follow a few simple rules.

Check the playing field for hazards, particularly when areas not laid out for the sport are used - often the case in "pickup" ball games.

Never play body-contact games, such as football, unless every participant has the proper equipment.

Wear the proper footwear for the sport. Street shoes with leather soles are hazardous for running on grassy, concrete, or asphalt surfaces. Stay out of "pickup" games of baseball, basketball, or touch football unless you are wearing rubber-soled footwear.

Don't "show-off" or try to perform beyond your ability or training. Base sliding, for example, requires training and practice and should not be attempted by the weekend athlete.

Before playing vigorous sports, take a few minutes to exercise your muscles and joints. This might help you avoid pulled muscles, sprained ankles or injured knees.

Know your limit. Don't push yourself in competitive sports unless you are in proper physical shape. Avoid overexertion. An overtired person is more susceptible to accident and injury.

Play it smart - don't take chances.

2. **Volleyball.**

Normally, volleyball is not considered a contact sport. However, it occasionally does become a contact game and a source of sprains enough to result in disabling injuries. These injuries are primarily the result of body contact between players jumping for the ball at the net. This contact throws the players off balance, resulting in uncontrolled falls. Game rules for volleyball cite a court 30 by 60 feet, a net stretched between two posts so the top of the net is exactly 8 feet high, and only six players on a team.

Over crowding often occurs in volleyball. A team of 9 to 12 players on a court designed for a team of 6 results in greatly increased body contact through collision. When such a collision occurs between two players jumping for the ball, there is danger of serious injury.

The recreational/non-regulation volleyball court is often much smaller than standard. The surface of the court is often uneven terrain with hazards close to the boundary lines. The net is varied in height, increasing the number of "spiked" balls. These courts, and the large number of players set the stage for increased body contact, uncontrolled falls, and injuries. Considering the number of people who play volleyball, it is critical that the official rules of the game be followed.

3. **Regulation Football.**

Because almost continuous heavy body contact is involved, football is among the most hazardous of team sports. Only trained, well conditioned players should be permitted to participate in such hazardous games. Most hazards of football may be effectively controlled through pro;er attention to:

a. Fundamentals

Players should be skilled in basic fundamentals of the game, such as blocking, tackling, etc. Skill in the basics will help eliminate injuries. Before fundamentals practice, players should be conditioned by preseason physical training program.

b. Protective Equipment

Properly fitted shoulder, hip and thigh pads, as well as headgear should be worn by all players when body contact is anticipated, both in practice and in actual games.

c. Warmup

A gradual and thorough warmup before participating in practice or a game will aid in preventing strains and sprains.

d. Play

Unnecessary roughness and other unsportsman-like conduct must be controlled, and standard football rules enforced by officials.

4. **Touch Football.**

A belief that touch football is a nonhazardous version of football contributes to many injuries which occur in this sport each year. This belief is largely responsible for the disregard shown for reasonable and effective safeguards which would control and prevent injuries.

Ordinarily, regulation football pads are not available for touch football. They are not required; however, when such equipment is available, it should be utilized and should be mandatory for organized league play.

Most touch football injuries are caused by failure to observe standard rules of the game. Contributing factors to these injuries are leaving the feet while blocking, failing to obey the whistle, loose officiating, etc. Playing on poorly located and poorly maintained fields is also a frequent cause of injuries.

©1994 Bongarde Communications Ltd.

Stay Safe Off-The-Job Too!

We'd like to see you back here tomorrow — healthy and free of injury. Many injuries occur because of accidents off the job. Your safety around the clock and seven days a week is important to management and your co-workers here.

So take some of your on-the-job safety training away with you and apply it to your life at home, on the road and during recreational pursuits.

Here are some reminders for off-the-job safety:

• Keep your home fire-safe. Inspect regularly for fire hazards such as electrical malfunctions and accumulations of combustible clutter.

• Install smoke detectors in all of the recommended locations in your home. Keep them serviced and maintained according to the manufacturer's directions.

• Keep the correct fire extinguishers in your home and vehicle, and know how to use them. Make sure they are charged and maintained according to the instructions.

• Hold regular family fire drills so each person knows how to get out alive. Have a designated spot where family members are to assemble outside in case of a fire or other emergency.

• Get rid of hazards which could cause falls in your home. Keep stairways and steps in good repair. Maintain adequate lighting along walkways and stairs. Never store things on the stairs, even temporarily. Install non-slip surfaces in bathtubs, showers and bathroom floors.

• Use ladders safely. Make sure your ladder is in good repair. Don't stand on the top few rungs of a straight ladder or a stepladder. Keep your body close to the ladder and do not lean away from it because you could cause it to tip. Never use a metal ladder such as aluminum for any electrical work, even changing a light bulb. Keep ladders away from all overhead power lines and electrical installations.

• Avoid other hazards of electric shock. Remember that moisture and electricity are a fatal mixture. Never handle electrical equipment, including kitchen appliances, with wet hands. Use a Ground Fault Circuit Interrupter with electrical equipment anywhere moisture might be present, such as outdoors, in the bathroom and kitchen. Take good care of electrical equipment to prevent damage to wiring and insulation.

• Wear your seat belt whenever you are traveling in a vehicle — even to the corner store.

• Never drive under the influence of alcohol or other drugs. Keep in mind that other factors such as exhaustion or emotional upset can also affect your ability to drive safely.

• Wear correct Personal Protective Equipment (PPE) off the job too. Using a lawnmower or chain saw calls for safety-toed footwear and ear protection. Using power or hand tools requires eye protection such as safety goggles.

• Make sure that any dangerous household substances such as cleaning products and pesticides are correctly labeled, stored in their original containers and kept out of the reach of children and pets. Flammable liquids should be stored in a well-ventilated area away from any sources of ignition.

Remember to take your on-the-job safety awareness home with you — we want to see you back tomorrow.

The information presented in Copy Ready! has been compiled from various sources which are believed to be reliable. However, it cannot be assumed that all acceptable measures are contained in this article nor that additional measures may not be required under particular or exceptional circumstances, or your own company procedures, or by federal, state/provincial and local law. ***Copy Ready! is intended for in-house use only — commercial reproduction is a violation of our copyright agreement.*** *For a complete catalog of Bongarde Communications Ltd. products please call 1-800-667-9300.*

WINTER CAR CARE

Pay extra attention to your car and safety during the holidays. This time of the year can be stressful and busy.

1. Be sure your car is safe. For Winter Car Care check the following:

*Battery

*Fluid levels - i.e., oil, antifreeze, brake fluid, wiper fluid, etc.

*Exhaust system

*Wipers and defroster

*Brakes

*Lights

*Tires

2. Allow extra travel time plan for:

*Heavier traffic

*Poorer visibility

*Changing road conditions due to ice and snow

3. Carry emergency supplies. These include:

*Shovel

*Booster cables

*Flashlight

*Low chain

*First-aid kit

*Matches

*Flares

*Blanket

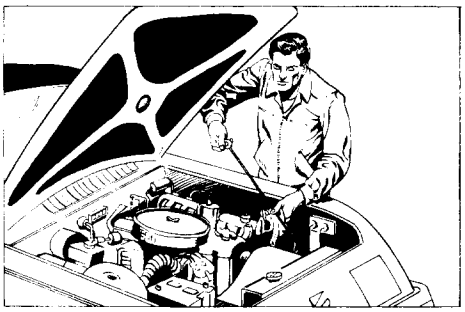
*Scraper

*Sand

DEFENSIVE DRIVING

Preventing Off The Job Auto Accidents

Even professional drivers can be the victims of off the job auto accidents. The family car may not seem as complex to operate as a big rig, but it is equally as prone to accidents and collisions unless it is driven with safety in mind. Safe driving is defensive driving—making sure that your vehicle is in good operating condition, following traffic rules and signals, looking out for the other driver, and adapting your driving to special conditions like bad weather, poor roads, and even your frame of mind. Safe driving also means never operating a vehicle while under the influence of alcohol or other drugs or medications.



Check your vehicle frequently—at least once a week—to be sure that it is in good working condition.

Check Your Vehicle

Check your vehicle frequently—at least once a week—to be sure that brakes, accelerator, belts, radiator, oil, battery, tires, head lamps, and brake lights are all in good working condition. If you notice *anything* abnormal in the way your car sounds or operates, bring it in for repair immediately.

Follow Traffic Laws

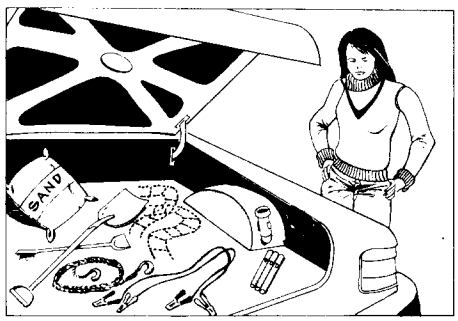
Traffic laws vary from state to state. Know your own state's laws, and if you are planning an out of state trip, familiarize yourself with the laws of the areas you'll be driving through. Many states allow right turns at red lights. This means that you must come to a complete stop first, check for pedestrians and oncoming vehicles, and then, if the road is clear, you may turn.

Watch The Other Driver

While you may be an excellent driver, there's no way of knowing if the other drivers on the road are as safe as you. Stay clear of (and never try to pass) vehicles that swerve in and out of traffic, brake inconsistently, fail to signal, drive very slowly *or* very fast, or that do not respond to traffic signals quickly. Reduce your speed, if possible, or pull over and let the suspect vehicle get out of your way. Report suspicious drivers to the local police or highway patrol.

React To Special Conditions

Road and weather conditions can affect the way you drive. When roads are slick from rain, ice, or poor surfaces, reduce your speed and proceed cautiously.



Keep sand, chains, or salt in your car trunk, for winter emergencies.

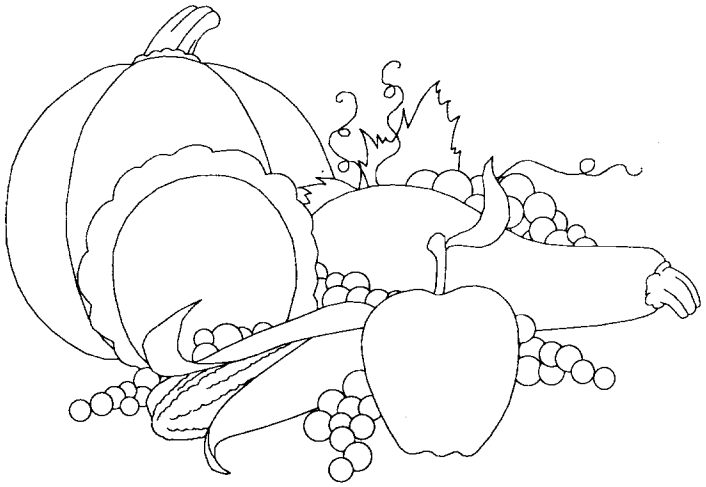
Keep sand, chains, or salt in your car trunk to improve traction. If you skid, *do not brake.* Instead, take your foot off the accelerator, and turn the car in the direction you want the front wheels to go. In dense fog or heavy rain, where visibility is bad, pull to the side of the road if possible, and wait until conditions improve. (Keep your emergency flashers on so that oncoming drivers can see you.) When you start to drive again, use your low beams and proceed with caution. Always turn on lights at dawn and dusk when visibility is dim.

Stay Alert

The best defense you have against potential auto accidents is your own ability to remain alert and aware while driving. That's why alcohol, drugs, or other medications can be lethal when you drive. They affect your ability to concentrate and severely impair your reaction time which can lead to injury, disability, and all too often, death—not only of the driver, but of innocent victims as well. Be alert, be aware, and be safe. Defensive driving is everybody's business.

©1988 PARLAY INTERNATIONAL

THANKSGIVING SAFETY



When you think of Thanksgiving, what first comes to mind? Perhaps a stuffed turkey, hot from the oven. Maybe mashed potatoes with lots of butter and gravy. Of course, pumpkin or apple pie. Warm kitchens and smiling faces. Each of us has an instant picture that pops into our minds when we think of Thanksgiving. It is a time to reflect on our many blessings and we, as a nation, enjoy sharing this special dinner and time.

Are you going home for the holidays to visit parents, relatives and old friends? Many of us travel, both near and far, to get to our destination. This has become the busiest holiday for highway traffic, so before you embark on your journey, make sure your vehicle is ready. Before take off, check and top off all fluids and tire pressure. Be sure your windows are clear and mirrors adjusted.

Next, check the projected weather reports. Despite your destination, weather, especially this time of year, can be unpredictable. To make the trip less stressful, develop an emergency package to keep in the trunk. Basics start with a blanket and some extra clothes in case you become stranded due to poor road conditions and/or hazardous weather. Include maps, a flashlight and batteries, a transistor radio, matches, flares and some type of rations such as nutrition bars and water.

Finally, remember to buckle up your entire family. Each family member should have their own safety belt. Use lap belts and shoulder straps together. Small children should be in child restraint seats for maximum protection, furthermore, it is the law. Although children sometimes want to sit on a parent's lap when traveling, remember the force of a parent's body can crush a child against the dashboard or windshield in an accident.

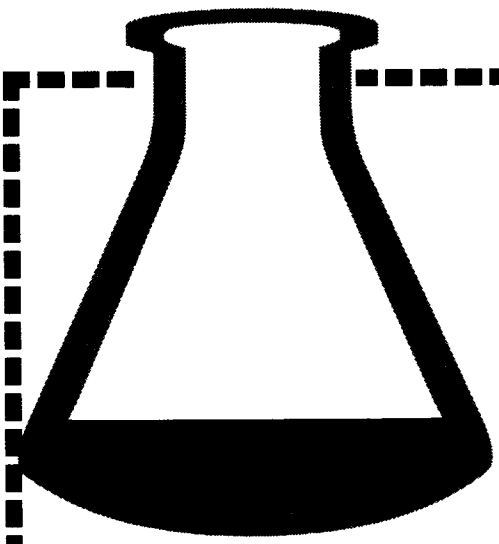
So now you are ready to go! Drive sober at a safe speed for weather and road conditions. It is better to spend a little less time at your destination than no time at all because of an accident.

Happy Thanksgiving to you and yours, and a safe return to work.

PROTECTING AGAINST CHEMICAL HAZARDS

Your Checklist For Safe Use Of Chemicals

Corrosives, solvents, and other chemical substances can be potentially dangerous. But, they needn't be harmful when they are handled, stored, and disposed of safely. The following checklist is your guide to protecting against chemical hazards before they can become chemical emergencies.



✔ Read container labels and Material Safety Data Sheets (MSDSs). They will list safe handling procedures, such as "Wait for corrosive (or solvent) to dry completely before welding or cutting metal."

✔ Always add acids to water (not the other way around) to prevent boiling over and splashing.

✔ Never sniff a chemical to identify its type or location.

✔ Use appropriate personal protective equipment (PPE) when working with chemicals. These may include chemical splash goggles, full-face respirators, safety gloves, barrier creams, splash aprons, corrosive-resistant boots or any combination of the above.

✔ Make sure that PPE fits properly and that you know how to use it.

✔ When using respirators, match your canister or cartridge to the correct respirator and the particular chemical and replace when necessary.

✔ Don't wear contact lenses; these can absorb chemicals or trap them against your eyes.

✔ Know the location of eyewash stations and safety showers and how to use them. (In most cases, if you are exposed to a chemical splash, they will be your first emergency treatment.)

✔ Slowly mix corrosives or solvents, or dip parts into them.

✔ Never put your hands into corrosives or solvents—even if you are wearing gloves.

✔ Always wash your hands well before eating or smoking, and before and after every shift.

✔ Use engineering controls, including fans, exhaust hoods, and other ventilation systems installed for your protection.

✔ Know emergency first aid procedures.

✔ If you are unclear about your company's safety procedures for handling chemical substances, speak to your supervisor. Make sure you understand *everything* you need to know about protecting yourself from chemical hazards.

©1988 PARLAY INTERNATIONAL

Carbon monoxide (CO) is a deadly gas which causes many deaths each year. It kills without warning because it has no smell or color.

It is a by-product of burning of organic fuels such as gasoline, diesel, wood, propane, natural gas, charcoal briquettes and other such materials. When these materials are burned in a poorly-ventilated space, carbon monoxide can build up and cause poisoning.

This poisoning can occur even when there is plenty of oxygen in the air. The carbon monoxide replaces oxygen in the body's circulatory system, quickly causing illness and even death.

These are some of the symptoms of CO poisoning:

- Headache
- Dizziness
- Sleepiness
- Ringing in the ears
- Nausea
- Poor co-ordination and weakness
- Confusion
- Breathing difficulty
- Unconsciousness

Some of the symptoms of carbon monoxide exposure may be mistaken for other ailments such as allergies, the flu, exhaustion or a heart attack. Carbon monoxide poisoning can also be mistaken for intoxication from alcohol or drugs.

If carbon monoxide exposure is suspected, move immediately to fresh air. If the case is a mild one, this may be all that is required for the person to recover fully. However, more serious cases of exposure may require Cardiopulmonary Resuscitation (CPR) and medical attention. Oxygen may have to be administered.

In some workplaces, carbon monoxide is not merely an unwanted by-product of combustion, but is actually part of the process. Carbon monoxide elimination and control methods will vary greatly from one industry to the next. However, here are some general tips on ways in which carbon monoxide exposure can be eliminated:

- Switch to equipment which is operated by a power source other than organic fuels — such as electricity or batteries.
- Keep any fuel-burning equipment in good condition so that it is burning efficiently. This would include fuel-burning engines, furnaces and heaters.
- Separate the work area from the carbon monoxide hazard.
- Ventilate the area. Local exhaust ventilation, or large complex systems may be required depending on circumstances.
- Monitor the atmosphere to detect carbon monoxide levels.
- Use supplied-air respiratory protection when the hazard cannot be eliminated.

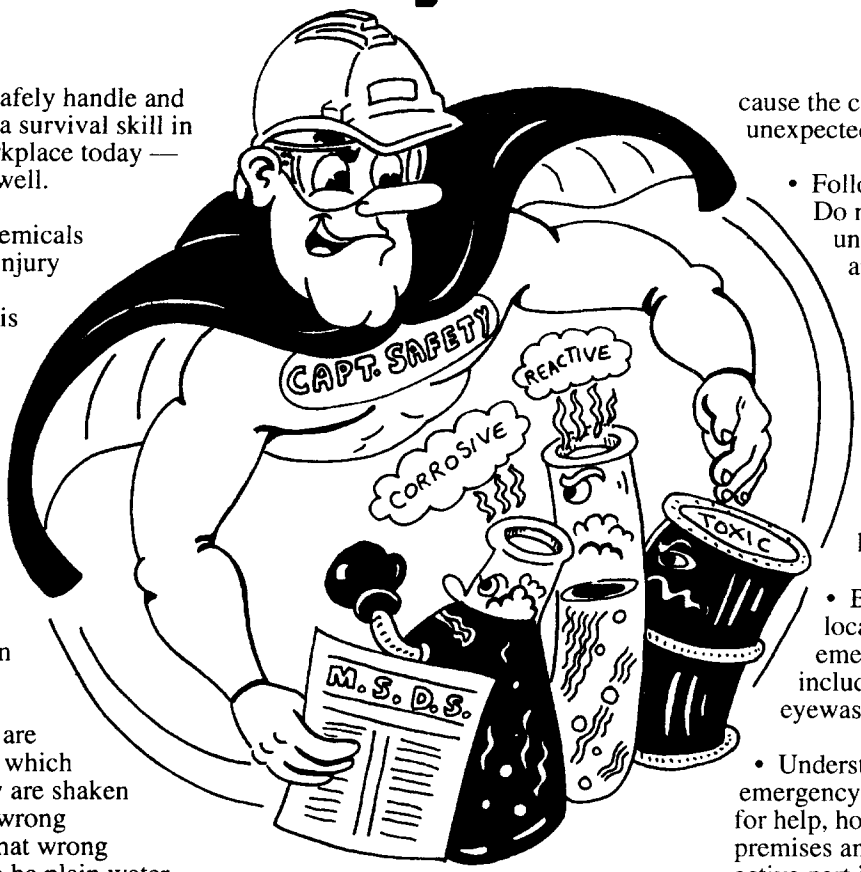
Don't forget about carbon monoxide hazards off the job too. Here are some safety tips:

- Keep your automobile and its exhaust system in good repair.
- Never run the engine in an enclosed space such as a garage.
- If you must sit in a stationery vehicle with the engine running — to keep warm, for instance — be sure to open a window.
- Keep all heaters and furnaces in good repair too, so that they will burn fuels completely.
- Provide adequate ventilation for any heaters.
- Never use a barbecue indoors. There have been a number of cases of carbon monoxide poisoning occurring as people tried to use barbecues indoors for cooking and heating during power outages.

The information presented in Copy Ready! has been compiled from various sources which are believed to be reliable. However, it cannot be assumed that all acceptable measures are contained in this article nor that additional measures may not be required under particular or exceptional circumstances, or your own company procedures, or by federal, state/provincial and local law. ***Copy Ready! is intended for in-house use only — commercial reproduction is a violation of our copyright agreement.*** *For a complete catalog of Bongarde Communications Ltd. products please call 1-800-667-9300.*

©1994 Bongarde Communications Ltd.

Chemical Safety Is A Survival Skill



Knowing how to safely handle and store chemicals is a survival skill in just about any workplace today — and off the job as well.

When misused, chemicals can cause serious injury or death. In some cases, the damage is immediate, but in other cases it causes problems years later. Certain chemicals are toxic or poisonous. Some chemicals are corrosive and can cause burning or irritation to the skin and eyes. Other chemicals are flammable. There are reactive chemicals which can explode if they are shaken or mixed with the wrong substance — and that wrong substance can even be plain water.

With these very serious hazards in mind, it is important to know how to work safely with chemicals. The following are some general guidelines for chemical safety. (They are not intended to replace company training and procedures in handling and storing chemicals.)

- Know the chemicals with which you work, and any chemicals in your work area. Make sure you understand their hazards and know the specific techniques required for safe handling and storage.

- Make sure chemicals are properly labeled. Never use an unlabeled substance.

- Know where to find the Material Safety Data Sheet (MSDS) for any chemical in your work area.

- Keep all sources of ignition away from any chemicals which might be flammable or explosive. This means no smoking, of course.

- Separate any chemicals which might react to one another. For instance, keep oxidizers away from fuels.

- Know how to safely dispose of unused chemicals, and how to deal with spills. Never discard chemicals down the sink.

- Be alert to any changes in the strength or composition of a chemical. Characteristics such as odor, color, thickness and crystallization might indicate changes or deterioration. Such factors as age, evaporation, temperature changes and contamination might cause changes in chemicals. These changes could cause the chemical to react in an unexpected way.

- Follow all instructions exactly. Do not mix any chemicals unless you are authorized and qualified to do so.

- Assume that any unfamiliar chemical is hazardous.

- Be aware of what the chemical is supposed to do. If the chemical is not doing what is expected, halt the process.

- Be familiar with the location and use of emergency equipment — including safety showers, eyewashes and fire extinguishers.

- Understand your part in emergency procedures — how to call for help, how you should evacuate the premises and if you should take any active part in containing a spill or fighting a fire.

- Wear the correct Personal Protective Equipment (PPE) for protection against the specific chemical to which you will be exposed. Safety eye wear, gloves and footwear made of certain materials, and a lab coat may be among the PPE required.

- Never eat, drink or smoke around chemicals. You risk ingesting the chemicals if you do so.

These are just a few guidelines for handling and storing chemicals. Make sure you have adequate training and supervision before attempting to work with any chemicals. And remember to safely handle and store any chemicals off the job too.

The information presented in Copy Ready! has been compiled from various sources which are believed to be reliable. However, it cannot be assumed that all acceptable measures are contained in this article nor that additional measures may not be required under particular or exceptional circumstances, or your own company procedures, or by federal, state/provincial and local law. ***Copy Ready! is intended for in-house use only — commercial reproduction is a violation of our copyright agreement.*** *For a complete catalog of Bongarde Communications Ltd. products please call 1-800-667-9300.*

WORKING WITH SOLVENTS

Recognizing And Preventing Hazards

Even if you've worked with degreasers and other solvents for a long time, you might not be aware of how hazardous they can be when you don't handle them properly. Solvents are substances, usually liquid, that dissolve other substances. Some familiar uses include degreasing, spray painting, dry cleaning, and paint softening.

The Hazards Of Solvents

Solvents can be toxic (poisonous) to the human body, and can burn, catch fire, or cause explosions. They can be especially dangerous because often they have no color or long-lasting smell. Most solvents evaporate quickly and are called "volatile." With volatile solvents, there is the hazard that you can breathe in their vapors.

If a spark, flame, or static electricity is present, many solvents can explode. Their upper and lower explosive limits, which tell you when an explosion is possible, are listed on their Material Safety Data Sheets (MSDSs). Some solvents have a "flash point" or catch fire at under 100° F. They are called "flammable," and are hazardous because their flash point may be below normal room temperature. Solvents with a flash point above 100° F are called "combustible."

Overexposure

You can irritate or damage skin, eyes, lungs, and other organs if you absorb too much of a toxic solvent. Permissible Exposure Limits (PELs) for many solvents have been

Labels and MSDSs list procedures for handling solvents safely.

Always use appropriate personal protective equipment.

set by the Occupational Safety and Health Administration and are listed on the MSDSs.

Eyes

If a solvent splashes in your eyes, acute (short-term) symptoms can include burning, watering, irritation, and redness. Overexposure to solvent vapors or mists can eventually cause chronic (long-term) symptoms like blurred vision, constant irritation, or permanent vision damage.

Breathing And Swallowing

If you suddenly breathe in or swallow a solvent, acute symptoms can include headache, nausea, vomiting, sore throat, dizziness, fatigue, giddiness, rapid or irregular heartbeat, and difficulty breathing. Over time, some solvents, when inhaled, can cause liver, kidney, or nervous system damage, unconsciousness, or even death.

Skin

One-time exposure, like splashing a solvent on your skin, can cause dry, scaly skin, rashes, burning or irritation. If a solvent enters your bloodstream through the skin, you can experience acute symptoms like those listed for breathing and swallowing. Longterm overexposure to solvents can cause contact dermatitis, a chronic skin condition which may include blistering, redness, and discomfort.

Your Best Protection

Your best protection is your common sense. Take the time to do the job right and think through all new procedures carefully. Follow your company's Hazard Communication program, use good personal hygiene and always use the appropriate personal protective equipment recommended.

©1988 PARLAY INTERNATIONAL

HANDLING SOLVENTS

Guidelines For Storage And Disposal

Whether you've worked with solvents for years, or you've just started, practicing safe handling procedures is always important. Even common solvents like degreasers and paint thinners can be hazardous when you breathe their vapors, splash them on your skin, or store them near heat.

Safe Storage

Follow these simple storage procedures and you'll reduce the possibility of danger from leaks, fires, and explosions.

❑ Read the Material Safety Data Sheet (MSDS) and container label on all solvents in question. Find out flash points (temperature at which they catch fire) and volatility (how quickly they evaporate).

❑ Use the personal protective equipment recommended on the MSDS.

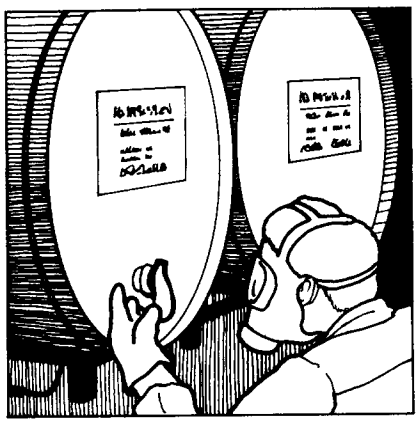
❑ Store all solvents in temperature-controlled environments, out of direct sunlight.

❑ Store flammable solvents, if possible, where special ventilation and electrical systems minimize the possibility of accidental fire or explosion.

❑ Store flammable solvents in tightly closed safety containers.

❑ Dispense solvents from safety-approved nozzles and dispensers only.

❑ Store solvents away from oxidizers (any substance that causes fires easily.)



Check storage containers regularly to make sure they don't leak.

❑ Check storage containers regularly to make sure the spout, cap, and container are in good working order and don't leak.

❑ Immediately replace damaged container parts such as flame arrester screens.

❑ Never smoke around storage or dispensing containers for solvents.

❑ Don't carry lighters, matches, or sparking devices when handling solvents.

❑ Know the location of spill control stations and materials, eyewash stations and safety showers.

Safe Disposal

Each company has its own disposal policy and procedures. Ask your supervisor if you have questions about yours. These general rules apply to all worksites:

❑ Know whether contaminated clothing, PPE, rags, and materials should be decontaminated, cleaned, or disposed of, according to company policy. (Dispose of waste in tightly covered safety containers.)

❑ Always dispose of flammable solvents into approved containers, never into a sewer, storm drain, or garbage, or onto the ground.

❑ Never smoke around disposal sites or containers.

❑ Know the location of spill control stations and materials, eyewash stations and safety showers.

Working Together

Your employer is your partner in keeping you safe from hazardous overexposure to chemicals like solvents. By following the procedures described above, you'll make sure you're doing all you can to ensure everyone's health and safety where you work.

Never smoke around solvents.

©1988 PARLAY INTERNATIONAL

EMERGENCIES INVOLVING SOLVENTS

Quick Responses Save Lives

Solvents are chemicals that dissolve other substances. They are found throughout industry and include such common chemicals as paint thinners, degreasers, and industrial cleaners. If you are careful, you may never be involved in a solvent emergency. But solvents can spill or leak, and the vapors can catch fire or explode. If you know what to do during an emergency, you can protect your safety, or even save your own or a coworker's life.

Act Quickly

The more quickly you respond during a solvent emergency, the less likelihood there will be of serious damage to people and property. You'll always be ready if you know your company's emergency plans. Read all Material Safety Data Sheets (MSDSs) and warning labels (which list emergency procedures) *before* handling solvents.

Handle an emergency yourself only if it is small and you are trained to do so. If it is a fire, make sure to use the right kind of extinguisher. Evacuate the area as quickly as possible as you let others know about the emergency. Then, notify your supervisor or the appropriately trained persons immediately. Do not reenter the emergency area without appropriate personal protective equipment (PPE) and training.

If your clothing becomes contaminated, remove it immediately. Decontaminate, wash, or dispose of it according to company policy. If there is a *medical emergency*, the individual should receive first aid and see a doctor as soon as possible.

Inhaled Or Swallowed

If you inhale solvent vapors, your symptoms may include headache, dizziness, nausea, vomiting, or difficulty breathing. Get to fresh air immediately. Ask a coworker to get medical attention for you. Artificial respiration may be necessary.

If you swallow a solvent, ask a coworker to get medical attention immediately, and to call the local Poison Control Center. (This number is listed in the front of your phone book, and may be posted on the wall.) Do not eat or drink anything unless it says to on the solvent's label, or you are told to do so by a medical professional.

In Your Eye

If you get a solvent in your eye, go to the nearest eyewash station. If no eyewash station is available, use any low-pressure clean water source. Remove contact lenses which can trap or absorb the solvent. Flush the eye for 15-20 minutes, letting water run from the inside to the outside of the burned eye. Keep the burned eye turned downward to prevent the solvent from running into your other eye. Do not apply neutralizers or ointments to the eye. You may need to restrain someone who has solvent in the eye in order to administer first aid.

On Your Skin

If you get a solvent on your skin, rinse (don't scrub) the affected area for 15-20 minutes. Use a faucet, hose, or other available clean water source. If the solvent is dry, brush it off before you begin to rinse. Remove the contaminated clothing as you wash. Do not put it back on until it has been decontaminated. If possible, after rinsing, cover the burn with a sterile dressing. Do not apply burn ointments or neutralizing solutions.

If you get a solvent on your skin, rinse (don't scrub) the affected area for 15-20 minutes.

After An Emergency

Symptoms of solvent exposure may appear immediately, or they may not be noticeable until some time later. Therefore, if you've been involved in a solvent emergency, remain under medical observation until your doctor feels it is safe to release you.

©1988 PARLAY INTERNATIONAL

WORKING WITH CORROSIVES

Recognizing and Preventing Hazards

Even if you've worked with corrosives for a long time, you may not be aware of the different dangers they may pose. Corrosives are harsh substances, usually acid or base, which are found in such processes as dry cleaning, oil refining, and metal plating among others.

The Hazards Of Corrosives

Whether they are acids such as sulfuric, or bases such as lye, corrosives can be hazardous when mishandled. They are usually toxic (poisonous) to the human body, destroying skin, eyes, and other organs on contact. Corrosive vapors can harm internal organs if you inhale or swallow them. If corrosives are combined or stored with the wrong chemicals, there may be an explosion, fire, or release of dangerous vapors.

Exposure To Corrosives

Contact with a corrosive can cause different amounts of damage, depending on how the corrosive enters the body (for example, through the skin or through breathing), the quantity of the corrosive, its strength (concentration), and other qualities of the chemical. Permissible Exposure Limits (PELs) for many corrosives have been set by the Occupational Safety and Health Administration and are listed on the Material Safety Data Sheets (MSDSs).

Eye Exposure

If a corrosive mist or other small amount gets in your eyes, symptoms can include burning, watering, irritation, or inflammation. If a corrosive splashes in your eyes, the results can include cloudy vision, scarring, or even blindness, so you should seek emergency medical treatment immediately.

Breathing And Swallowing

If you breathe in a small amount of corrosive mist, symptoms can include nose, mouth, and throat irritation. If you breathe in more highly concentrated or a greater quantity of corrosive mist, you may have a heavy sensation in your chest and a hacking cough (a sign of inflamed lung membranes, or bronchitis). You may have chest pain and difficulty breathing (a sign of too much fluid in the lungs, or pulmonary edema). If you swallow even a small amount of a corrosive, you may experience severe abdominal pain. Get medical help immediately.

Skin Exposure

Skin exposed to small amounts or low concentrations of corrosives can become irritated, itchy or sore—signs of contact dermatitis. If your skin is splashed by a corrosive, it can burn your skin, causing blisters, or may penetrate through the skin itself.

Your Best Protection

Your best protection is your common sense. Take the time to do the job right and think through all procedures carefully. Follow your company's Hazard Communication program carefully, and always use the appropriate personal protective equipment recommended for the corrosives you are handling.

Corrosives can be dangerous, but they needn't be harmful when they are handled, stored, and disposed of safely.

©1988 PARLAY INTERNATIONAL

HANDLING CORROSIVES

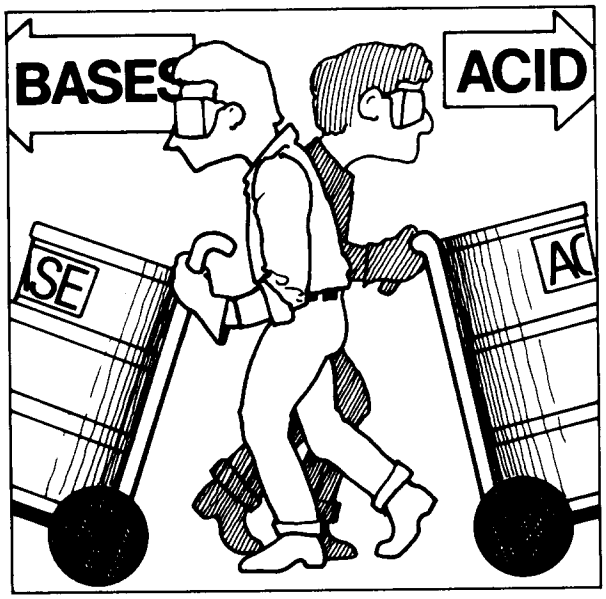
Guidelines For Storage and Disposal

Even if you've worked with corrosives before, you may not know all the different kinds of hazards they represent. You'll find harsh corrosives, which generally are acids or bases, in many processes like water treatment, chemical manufacturing, and metal plating.

Store Them Safely

Take the time to follow these safe storage suggestions, and you'll help avoid many corrosive hazards:

❑ Read the Material Safety Data Sheet (MSDS) and container label for the corrosive you're handling. Use personal protective equipment (PPE) and procedures listed on the MSDS. Never take shortcuts—it isn't worth it!



Acids and bases are an explosive combination, so store them separately.

❑ Acids and bases are an explosive combination, so store them separately. You'll protect yourself and coworkers from fires and dangerous gas leaks, too. If you're not sure whether the substance is acid or base, read the label or MSDS.

❑ Store corrosives in tightly closed approved containers separate from flammable and/or combustible liquids. Dispense them only from approved nozzles and dispensers. Store large drums and containers below eye level whenever possible to avoid splashing your face or eyes.

❑ Check storage containers regularly for leaks, and to make sure that caps and spouts are in good working order.

❑ Don't smoke around corrosives. Don't carry lighters, matches, or sparking devices when you're handling them.

❑ Know the location of spill control stations and materials, eyewash stations, safety showers, and sources of fresh air. A quick response can make a life-or-death difference.

Dispose of Them Properly

Your company has carefully planned disposal procedures. If you don't understand them, or the rules below, ask your supervisor. Your health and safety are at stake.

❑ Know whether contaminated clothing, PPE, rags and materials should be decontaminated, cleaned, or disposed of. (Dispose of waste in tightly covered safety containers.)

❑ Always pour liquid corrosives into approved containers, never into the drain, sewer, or garbage, or onto the ground.

❑ Know the location of eyewash stations, safety showers, fresh air, spill control stations and materials. They could save someone's vision, lungs, even life.

❑ Never smoke around disposal sites or container.

Two Protectors

Your employer has established safety policies and procedures to protect you from overexposure to corrosives. Use these guidelines and your common sense for maximum protection.

©1988 PARLAY INTERNATIONAL

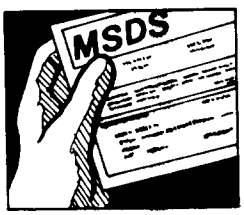
EMERGENCIES INVOLVING CORROSIVES

Quick Responses Make The Difference

Corrosives are found in many processes like metal plating and industrial cleaning. These harsh acids and bases can explode, cause fires, or harm the human body very quickly. Your quick response to an emergency can mean the difference between a slight skin irritation and a blistering burn, or even between life and death.

Be Smart Ahead Of Time

Start now by learning your company's emergency procedures and the rules below. Then, *before* you handle, store or dispose of a corrosive, read the Material Safety Data Sheet (MSDS) and label to learn about the most effective emergency procedures.



Handle a spill, leak, fire or other emergency yourself only if it is small *and* you are trained to do so. Otherwise you might make the situation more dangerous. Evacuate the area as quickly as possible as you let others know about the emergency. Then, notify your supervisor or an appropriately trained person immediately.

If a corrosive gets on your clothes, keep gloves on while you remove the clothes immediately. Follow company procedures for cleaning or disposing of the clothes.

Water And Air: The Best Medicine

For most medical emergencies involving corrosives, the first treatment will be water (for skin and eyes) or fresh air (for inhalation). But, since corrosives are so harsh, immediate treatment by medical professionals is always critical.

In Your Eyes

If a corrosive gets in your eyes, go directly to the nearest eyewash station. If none is nearby, use any low-pressure clean water source, such as a hose. Remove contact lenses which can absorb or trap the corrosive. Flush your eyes for 15-20 minutes, letting the water run from the inside to the outside of the eyes. Do not apply neutralizers or ointments, which can make potential damage worse. You may need to restrain someone who has corrosives in the eyes in order to administer first aid. Immediately *after* flushing, get the person to a medical professional for further treatment.

On Your Skin

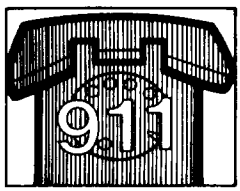
If you get a corrosive on your skin, rinse (don't scrub) the affected area for 15-20 minutes. If you are not near a safety shower, use a faucet, hose, or any clean water source. Remove any contaminated clothing and if necessary, dispose of it. Do not put clothing back on until it has been decontaminated or cleaned. Do not apply burn ointments or neutralizing solutions. If possible, after rinsing, cover the burn with a sterile dressing, then get the individual to a medical professional immediately.

Inhaled

If you inhale corrosive vapors, symptoms can range from slight throat irritation to serious difficulty breathing. Get to fresh air immediately, and ask a coworker to get medical attention for you right away.

Swallowed

If you swallow a corrosive, ask a coworker to get medical assistance immediately and to call the local Poison Control Center. (This phone number is in the front of your phone book, but may also be posted on the wall.) Don't eat or drink anything unless it says to on the corrosive's label or MSDS, or, if a medical professional tells you to.



After An Emergency

Corrosives do much of their damage quickly, but some symptoms may not appear immediately. If you've been in an emergency involving corrosives, stay under medial observation until your doctor releases you.

©1988 PARLAY INTERNATIONAL

FLAMMABLE HAZARDS

They May Surprise You

Flammables are common chemicals. They are liquids (like gasoline) and gases that burn, release vapors, or even explode under what *seem* like safe conditions. Protect yourself from unwanted surprises. Read this sheet carefully. Check container labels and Material Safety Data Sheets (MSDSs) for safe procedures.

The Nature Of Flammables

Flammable gases and liquids burn at close to room temperature (under 100° F), when they are near a spark, flame, or even static electricity. Many of them evaporate quickly. These are called "volatile." Flammables can also explode. Their MSDSs can tell you when: look for the upper and lower explosive limits.

Some chemicals are so flammable that they burn simply from contact with air. These are called "pyrophoric". ("Pyro" means fire, "phoric" means "carrier".)

Your Best Defense

Your best defense against flammables is to play it safe. Never take shortcuts or unnecessary risks around these chemicals. MSDSs will let you know how to avoid conditions or other chemicals which can cause them to explode or burn. Ask your supervisor if you have questions.

9 Ways To Stay Safe

1. Keep flammables away from fire and sparks. Never smoke, cut or weld around them.

2. Keep flammables and reactives away from each other. Reactives are chemicals which explode, burn or release dangerous vapors very easily.

3. Know the location of the right kind of fire extinguisher for the chemical you're using. The wrong extinguisher can spread a fire.

4. Wear the right Personal Protective Equipment (PPE) for the job. Make sure it fits.

5. Work in well-ventilated areas. Use available fans, hoods, and ventilation systems.

6. Check to see that all containers are labeled. They should be in good working order. Check caps, screens, valves, seals and containers for leaks. Replace or dispose of containers and parts if necessary.

7. Do not mix flammables with other chemicals unless you have been instructed to do so.

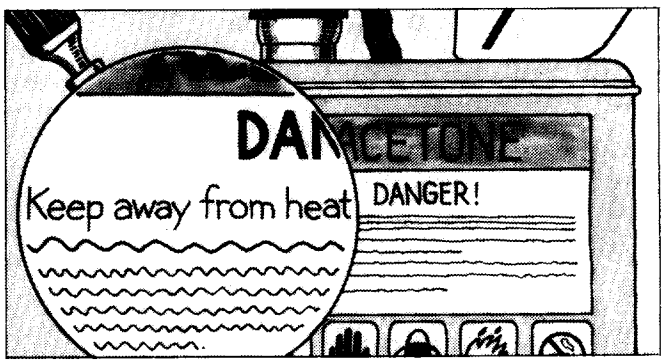
8. Use grounding and bonding wires to prevent dangerous static electricity while you are transferring flammables from one container to another.

9. Take special care to handle, store and dispose of flammables properly.

Never smoke, cut or weld around flammables.

Respect And Protect

Each flammable reacts differently to its environment. Respect these chemicals and follow safe procedures. You'll protect yourself and others in your workplace from unwanted fires and explosions.



Flammable gases and liquids can catch fire at under 100° F.

©1988 PARLAY INTERNATIONAL

FLAMMABLES

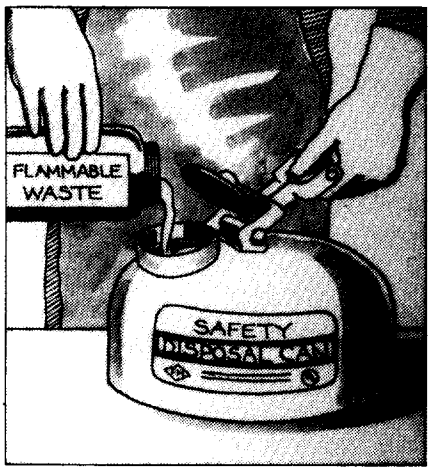
Safe Handling, Storage and Disposal

Flammables are liquids or gases that burn at temperatures under 100° F. Since that is close to room temperature, there is always a great danger of flammables catching fire or exploding. Handling, storing and disposing must be done carefully to prevent serious accidents.

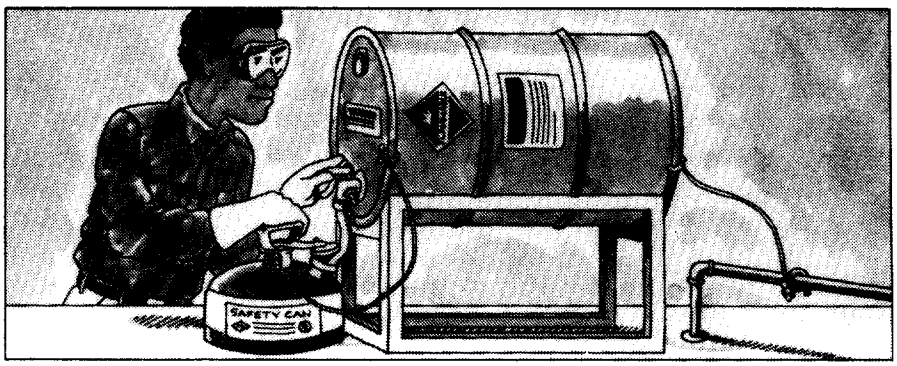
Read the MSDS First

Before handling a flammable chemical, always read the Material Safety Data Sheet (MSDS). Container labels provide helpful information, but the MSDS is much more complete. It includes guidelines about handling, storage, disposal, first aid, and emergencies.

Each flammable is different, although most evaporate quickly. Some explode when they are near even tiny sparks. Some explode simply on contact with air. When you read the MSDS, you'll know just how to work with the particular chemical.



Dispose of flammables in approved containers.



Use grounding and bonding wires when transferring flammables from one container to another.

Use common sense around flammables. Never smoke, cut or weld when you are near them. Don't mix a flammable with another chemical unless instructed to do so. Wear the right Personal Protective Equipment (PPE) and use all suggested ventilation systems.

Static electricity can start fires when flammables are transferred from one container to another. Use grounding and bonding wires to prevent static.

Before you begin working with flammables, make sure you know the location of two important safety tools: the spill control station, and the correct fire extinguisher.

Store Flammables By Themselves

Flammables should be stored by themselves, in a temperature-controlled area. It should be well-ventilated. Keep flammables far from heat or electric sources.

Store flammables in approved safety containers. The containers should have vapor-tight caps and flame arrestors. Check to see that all containers are labeled and in good working order. Fix any leaks or damaged parts, or dispose of them.

Dispose Of Flammables Safely

Your company and the MSDSs will let you know how to dispose of flammables safely. Use only approved containers. Never pour flammables into the drain, sewer, garbage can, or ground. If your clothing or other materials are contaminated, follow your company's policy for disposal or decontamination.

Working Together Is The Only Way

It's important for you and your employer to work together. That's the only way to prevent flammable hazards. Your employer will provide training and equipment. It's your job to use what you learn and your common sense to protect yourself and your co-workers.

©1988 PARLAY INTERNATIONAL

FLAMMABLES

What To Do In An Emergency

Flammables are gases and liquids that burn, release vapors, or explode at close to room temperature (under 100° F). Flammable emergencies can have a "domino effect" quickly. A small spark that causes gasoline to explode leads to a large fire, which then leads to a large explosion. Injury to people and damage to property can be serious.

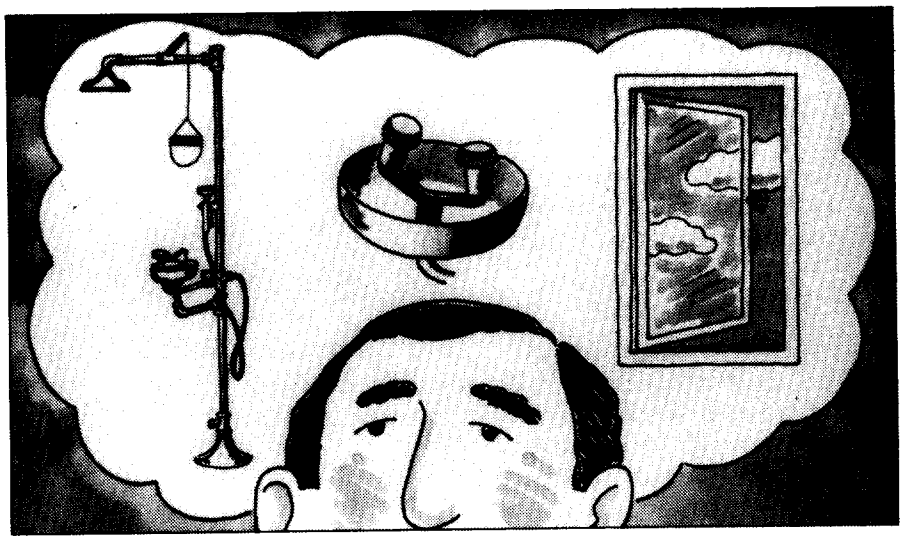
Knowing what to do in an emergency can prevent an accident from becoming more serious. You never know when an emergency will happen. It's a good idea to take the time now to read Material Safety Data Sheets (MSDSs), labels, and training materials. Become familiar with your company's emergency plans, and speak to your supervisor if you have questions.

Respond Quickly

In an emergency, your quick response may prevent damage. But you should handle the emergency yourself *only* if it is small and you are trained to handle it. Turn off any flames and equipment that can spark. Open windows and ventilate the area thoroughly. Clean up any spills using safe procedures and materials. If your clothing is contaminated, remove it immediately. Decontaminate, wash or dispose of it according to company procedures.

If there is a fire, make sure to use the right kind of extinguisher. The wrong kind can make the fire worse.

If you are in any doubt as to the seriousness of the situation, evacuate the area as quickly as possible, letting others know what has happened and closing the doors as you leave. Then, immediately find your supervisor or someone who is trained to handle this kind of emergency.

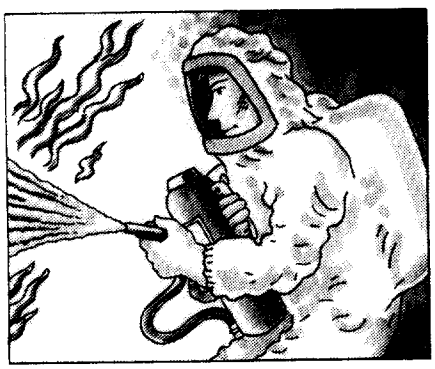


Know the location of the nearest eyewash stations, safety showers, and fresh air sources.

Go back into the room only if you've been trained and you are wearing the right Personal Protective Equipment. Do not go back in if you suspect an explosion. Some of the most serious accidents are caused by well-meaning coworkers trying to help when they are not trained to do so.

Quick, A Doctor!

In an emergency involving a flammable, get medical attention for the victims as soon as possible. You might save their vision, lungs, or even lives. Know the location of the nearest eyewash stations, safety showers, and fresh air sources. These are often the first medical treatments.



Only someone who is trained should handle flammable emergencies.

Before You Begin

Read, listen, learn and ask *before* you begin working with these chemicals. Use common sense and quick thinking. This is the best way to protect yourself and your coworkers.

©1988 PARLAY INTERNATIONAL

REACTIVES

Working with "Nervous" Chemicals

Reactives are "nervous" chemicals that can react violently, sometimes just by being moved. Avoid taking chances. Each time you work with reactives, read the Material Safety Data Sheet (MSDS) first. The information on this sheet and on container labels will also help protect you.

It Doesn't Take Much

It takes very little to make reactives or chemicals near them explode, burn or release dangerous vapors.

Explosives, the most obvious reactives, can sometimes go off in the presence of a tiny spark, even from friction.

Oxidizers, such as nitric acid, contain large percentages of oxygen. They can cause other substances, like flammables, to burn.

Unstable chemicals can explode under what seem like safe conditions, such as heat or slight movements. Some chemicals, such as ether, become unstable over time. These can be especially dangerous because your usual procedures are no longer safe.

Incompatible chemicals, such as acids and bases, seem stable on their own but react strongly when they are mixed together.

Polymerizing chemicals, such as epoxies, create their own chemical reaction. If this reaction happens too quickly, the result can be fire or explosion.

12 Ways To Protect Yourself

1. Know what causes a reactive to react. *Never* move, mix or work with a reactive until you do.

2. Keep fire and sparks far from reactives. Never smoke, cut or weld near them.

3. Keep reactives away from flammables. Flammables are gases or liquids (like gasoline) which burn at under 100° F.

4. Keep incompatible chemicals separate. Never mix or store them together.

5. Stay alert to the special dangers of unstable and polymerizing chemicals.

6. Unless you have special training on explosives, don't work with them.

7. Keep oxidizers far from materials that burn easily, such as paper or wood.

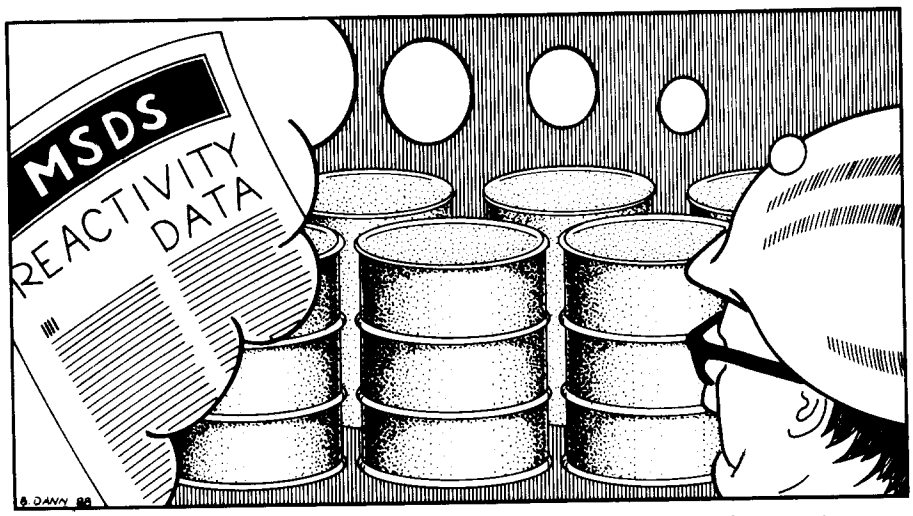
8. Wear the right Personal Protective Equipment (PPE) for the job. PPE must fit properly to protect you.

9. Label all containers, even temporary ones. Make sure that seals, screens, caps and containers are working properly and do not leak. Replace or dispose of parts or containers as necessary.

10. Ventilate the working area. Use suggested fans, hoods and ventilation systems.

11. Know where fire extinguishers are located. Use the right kind for the reactive you're working with: the wrong kind can spread the fire.

12. Handle, store and dispose of reactives according to company procedure.



***Never* move, mix or work with a reactive until you know what causes it to react.**

Play It Safe

Reactives can react so suddenly and violently that you should always play it safe. Avoid risks you don't need to take. Reading the MSDS and following the procedures it lists is excellent protection.

©1988 PARLAY INTERNATIONAL

REACTIVES

Safe Handling, Storage and Disposal

Reactives are chemicals that can explode or burn under what seem to be safe conditions. They need very special handling, storage and disposal to prevent unwanted surprises.

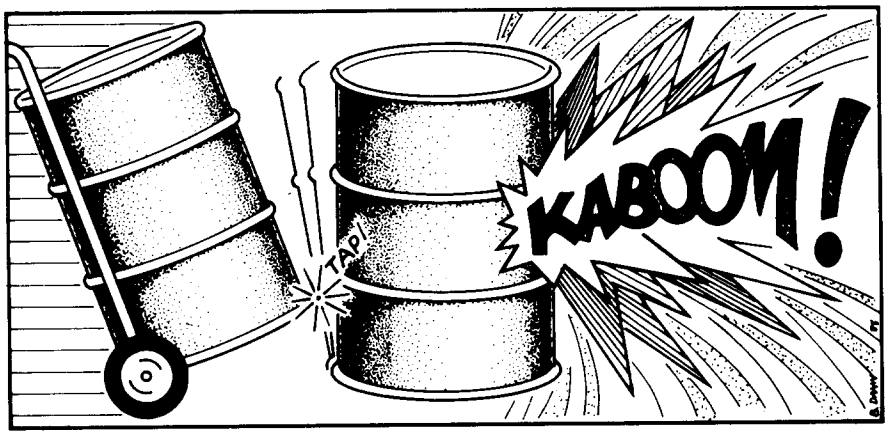
Take It Seriously: Handle With Care

"Handle with Care" should always be your guide. *Before* you handle a reactive, read the Material Safety Data Sheet (MSDS). It will tell you what causes the chemical to react. Some examples: *Unstable chemicals* can explode with the slightest shock. *Explosives* and *oxidizers* can go off in the presence of the smallest spark, even friction. *Incompatible chemicals* are unsafe when they are in contact with each other.

The MSDS will let you know the kind of Personal Protective Equipment (PPE) to wear and how to handle the chemical properly. Read the container label, too. Know the location of the correct kind of fire extinguisher and spill control stations.

Always dispose of reactive waste into approved containers designated for the specific material.

Some reactives explode from even small movements.



Make A Safe Bet: Store Alone

The safe bet is to store all reactives away from other chemicals. Keep them far from heat and electric sources.

Keep oxidizers such as nitric or sulfuric acid stored separately from flammables, paper, wood or other materials which can burn.

Unstable chemicals can react violently to conditions such as movement or heat. Store them in temperature-controlled areas which do not vibrate or receive shocks. Store incompatible chemicals such as acids and bases away from each other.

Dispose Of Them Wisely

Use common sense when disposing of reactives. These are some of the most dangerous chemicals. Follow company procedures and those listed on the MSDS. If you have questions, ask your supervisor.

Always dispose of reactives into approved containers. Never pour them into the drain, sewer, garbage, or ground. Never smoke around disposal sites or containers. Follow company policy for disposing of contaminated clothing, PPE, rags and materials.

An Important Partnership

The working partnership between your employer and you helps ensure everyone's safety at work. Your part includes taking safety training seriously, reading MSDSs and labels, thinking through procedures, and asking questions where necessary.

©1988 PARLAY INTERNATIONAL

REACTIVES

Preventing & Handling Emergencies

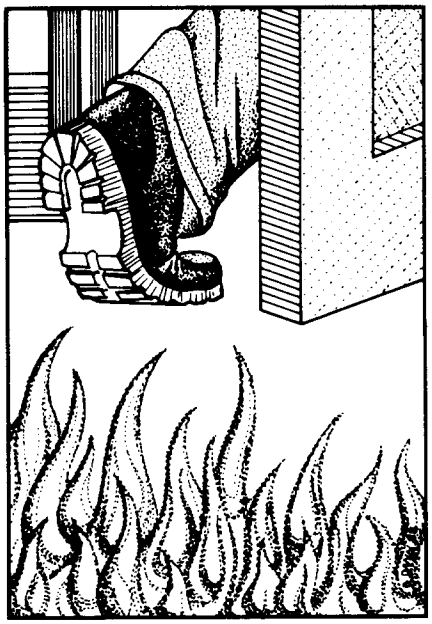
Reactives are dangerous chemicals which can explode or burn under conditions that are safe for most substances. They include ***explosives***, ***unstable chemicals*** (which can explode at the slightest movement) and *pyrophorics* (which burn when they are simply exposed to air).

Emergencies involving reactives can be very serious. Explosions and fires can spread quickly, starting from a tiny spark of static electricity or from a lit match. Take the time before you begin a task to read this sheet and all appropriate Material Safety Data Sheets (MSDSs).

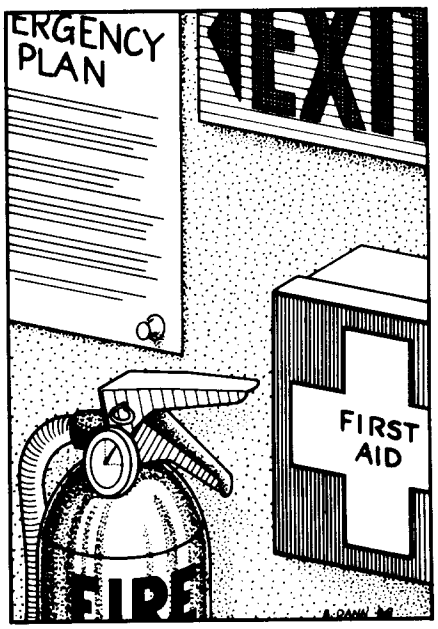
Before You Work With Reactives

When working with reactives, always follow your instructions precisely, *and remember:*

1. Know the location of nearest eyewash stations, safety showers, and fresh air sources.
2. Read the MSDS for the chemical.
3. Read the label on the container.
4. Learn your company's emergency plan.
5. Learn first aid skills, including CPR (CardioPulmonary Resuscitation).



In an emergency, leave the area immediately and close the doors.



Before **you work with reactives, study your company's emergency plan.**

Minimize Injury And Damage

Someone who is not trained to handle emergencies involving reactives can make the situation worse. If you have not received this training, you can still help keep possible injury and damage to a minimum.

If there is an emergency, or you think there might be, leave the area quickly. Tell others what has happened. Close the doors, then find a supervisor or someone trained to handle that kind of emergency.

Turn off flames or equipment that can spark if you can do so from outside the area. Open windows and ventilate the area thoroughly if possible.

Find A Doctor

Victims of reactive emergencies can be seriously hurt. Send for medical help as soon as possible, and perform first aid while you are waiting for the doctor. This may include bringing the victim to an eyewash station, safety shower, or fresh air source.

Use Common Sense

In emergencies, you need to use common sense and quick thinking. And if you use common sense beforehand, you can help prevent emergencies. Your company's Hazard Communication Program will give you information which is useful. Take your training seriously. Then ask your supervisor if you have questions.

©1988 PARLAY INTERNATIONAL