



## Why Green? Why Now? By David Holly

In the early 1970s, in the midst of a gas crisis, environmentalists started to get a lot of press and not all of it was positive. Those of us who were concerned about the environment at that time tended to put our arguments in terms of saving the Earth and using, what some considered, very unrealistic reasons and examples.

You may remember that environmentalists were accused of being more concerned with snail darters than human beings. But as the gas crisis eased and people became accustomed and resigned to paying more at the pump attention to environmental issues waned.

### **Experience and Knowledge**

There were two (for the purposes of our discussion) key points to take from this early experience:

- 1) People, in general, appear to be more motivated by financial issues than altruistic environmental goals.
- 2) To capture attention, we need to focus our attention on the effects environmental issues can have on people rather than other species (e.g., snail darters).

During the past two decades, scientists have conducted a great deal of research into the impacts that various chemicals, activities, and environmental conditions have on people and facilities. Science has documented the negative as well as the positive effects of air quality, lighting, noise, and a host of other indoor and outdoor environmental factors on students' ability to learn, child development, workplace performance, return on investment (ROI) of facilities, and general health.

Some of these studies were prompted by alarming increases in cancer rates and asthma rates, as well as incidences of poor childhood development. These statistics needed explanation, and scientists discovered direct links between these problems and a wide variety of chemical compounds and exposure to some common substances.

At the same time, businesses have placed an even greater focus on improving productivity and ROI. We've learned that cleaning products and procedures, often taken for granted for decades, can actually shorten the useful life of a facility degrading the building and decorating materials much faster than they should. And many of the chemicals, equipment, and techniques we have used for cleaning have been linked to productivity issues affecting the occupants of these facilities.



## Why Green? Why Now? By David Holly

More important, we've also learned that the converse is true. That is, by making some fairly simple changes to our product and equipment choices along with implementing some new procedures, we have documented marked improvements. Student standard test scores have improved, and absenteeism, of students, staff, and teachers, has decreased in schools that have "gone Green." Many facility managers and business managers see increased productivity, accuracy, and morale in facilities that implement a variety of greener systems, including cleaning.

### **Coming Full Circle**

In some ways we've come full circle. The "new" environmentalism as expressed by Green Cleaning stresses the importance to human health as well as the environment. We've finally learned that we are part of the environment and our actions, the products and cleaning procedures we use, can all have a major impact on our environment. Clearly, we understand today, that everything we do is interrelated with the environment and ourselves.

This is not to say that what we did in the past was wrong. We are not condemning traditional methods; we are pointing out that new learning, new products, and new procedures can have a dramatic and positive impact on our lives, health, productivity, and environment.

We like to talk of the triple bottom line: improving health, the environment, and profitability. These are not mutually exclusive goals; instead, if we pay careful attention, they can be mutually supportive goals.

Industry leaders are in a unique position to demonstrate through action just how positive these improvements can be. At the same time, they are able to increase their business. This is truly a way of getting good by doing good.

---

David Holly is the President of Don't Panic Productions, Inc., a video and multi-media production company providing services to the Jan/San industry and a strategic partner of The Ashkin Group, a leading consulting agency advocating Green Cleaning.



## Bio-Based Cleaning Alternatives Facts

(updated 02/10/05)

**Fact:** Bio-Based cleaning products are derived from natural extracts or oils of nuts, fruits, vegetables and plant matter that does not contain toxic chemicals. Since these products do not contain toxic chemicals they have a very low V.O.C. (Volatile Organic Compound) rating and have virtually no ill effect on the well being of people or the environment. Bio-based products do not contain acids, alcohol, ammonia, dyes, added perfumes, phosphates, chlorine bleach or caustic chemicals. In today's preferred environment, using a bio-based product for cleaning, offers an alternative to a healthier and safer lifestyle.

**Fact:** Most brand named popular liquid cleaning products sold today are not bio-based. They are derived from crude oil or petroleum distillates and are better known as "petro chemical products". These products contain toxic chemicals that have an impact on the well being of people such as sickness, dizziness, nausea, skin irritation, rashes, etc. and the environment. The main ingredient in a petro chemical product is Butoxyethanol, commonly known as "Butyl". Well known cleaning products like Fantastik, Windex, Clorox, Ajax, etc. and products that compete with these brand names are using Butyl or other toxic chemicals as their main ingredient. They contain a high level of V.O.C. (Volatile Organic Compound), which can cause the nausea, rashes and an unsafe environment.

In 1993, a branch of the US Government, The Public Building Services, decided to do something about all the complaints that they received from people using petro based cleaning products when cleaning buildings or homes. Most of the complaints were about experiencing dizziness, nausea and rashes that developed from using the standard brand named cleaning products. The PBS developed a program that alleviated and reduced some of the petro chemicals and V.O.C. levels in these products. Eleven (11) standards were developed that now required the manufacturers of the product to produce a less toxic and volatile cleaning solution for the end user. If the product met these new required 11 standards then it would be labeled a "Green" product. This meant that the product was deemed "environmentally safe" to use and it was backed by the Public Building Service. Since then, a host of "green" products have been produced. Some meet all the standards, some do not. But if it was labeled and marketed as a "Green" product, the public thought it was environmentally safe.



In 1998, The EPA ran a test program to see if these new standards were helping reduce illnesses and produced a safer environment. The conclusion was to enhance the program to include eighteen (18) standards for liquid cleaning chemicals. The top four standards are:

1. The product must be Bio-Based
2. The product cannot contain dyes
3. The product must be biodegradable (70%) within 28 days
4. The product cannot contain any added perfumes.

In recent years, a group of environmentalists came together to form a non-profit organization called "Green Seal". The Green Seal company does testing on products and gives their "seal" of approval for those that meet their requirements of products that are considered to be environmentally safe. The Green Seal requirements for an environmentally safe product may or may not meet the standards of all eighteen (18) standards developed by the Public Building Service. The fact is that only 40% of the products approved with the Green Seal meet the requirements. Green Seal is a private corporation with a board of directors and is not ruled by government standards. And, they are not accountable to the public. Therefore, they can set any standard or criteria and approve any product as long as the company looking to have the "Green Seal" pays for the testing to have their products approved. The approximate price for the test is \$25,000, whether you get the "Green Seal" of approval or not. Clever sales and marketing has established the Green Seal Company as the standard when measuring whether or not a product meets the "environmentally safe" criteria. However, "environmentally safe" does not mean that the product meets the criteria as established by the Public Building Service.

Recently, the Department of the Interior of the U.S. Government established that using the term "Environmentally Preferable" (Executive Order # 13101 September 14, 1998) means that it meets all eighteen (18) standards and criteria of measure as indicated by the Public Building Service.

Today, you will see products that are marketed as "Environmentally Safe", "Environmentally Responsible", "Environmentally Healthy", "Green", and "Green Seal Approved", These products may or may not meet the PBS criteria. Only "Environmentally Preferable" products are those that do.

Sources: [www.epa.gov](http://www.epa.gov) - [www.informinc.com](http://www.informinc.com) - [www.epa.gov](http://www.epa.gov) - (search "Glossary") - [www.greenseal.org](http://www.greenseal.org)



## “Green” Terminology

### **Bio-Based Product**

A commercial or industrial product, (other than food or feed) that utilizes biological products or renewable domestic agricultural (plant, animal, and marine) or forestry materials.

### **Environmentally Friendly**

A generic statement often used to designate a product or process that has a reduced ecological footprint when compared to other products/processes.

### **Environmentally Preferable**

Products or services that have a lesser or reduced effect on human health and the environment when compared with competing products or services that serve the same purpose. This comparison may consider raw materials acquisition, production, manufacturing, packaging, distribution, reuse, operation, maintenance or disposal of the product or service. (As stated in Executive Order # 13101, Sept 14, 1998)

### **Recycling**

The series of activities, including collection, separation and processing by which products or other materials are recovered from the solid waste stream for use in the form of raw materials in the manufacture of new products other than fuel for producing heat or power by combustion.

### **V.O.C- (Volatile Organic Compound)**

Any organic compound that participates in atmospheric reactions except those designated by EPA, as having negligible photochemical reactivity.

### **Biodegradable**

Capable of decomposing under natural conditions. According to the PBS guidelines for an Environmentally Preferable product 70% should be biodegradable within 28 days.



## 10 Reasons to go “Green”

Here's how the U.S. Green Building Council describes the “business case for high performance green buildings”:

1. Companies can recover higher initial costs, if any exist, through life cycle efficiencies, energy and water reduction and other savings.
2. These buildings can be designed so as to maximize their cost effectiveness.
3. Green techniques boost employee productivity.
4. They also enhance health and well being within the workplace, which may result in lower absenteeism and health care costs.
5. Clean and healthy buildings may reduce legal claims and liabilities for building owners and operators.
6. High performance green features translate into high value for a building's tenants.
7. Similarly, they increase property values, thanks to easier maintenance, higher occupancy rates and greater market valuations.
8. Going green may allow companies to take advantage of various state and local incentive programs.
9. Communities value companies that follow environmentally friendly practices.
10. Thanks to life-cycle efficiencies and other benefits, going green can help companies achieve more predictable results.



## The Dangers of Chlorine

Most of us have grown up with the idea that whiter whites (and brighter colors) mean cleaner clothes. We continue to use chlorine products with abandon to whiten and to disinfect. We write on white paper and bathe in and drink chlorinated water.

After all, who wants bacteria-infested water? In our society, chlorine is ubiquitous-and so are its side effects.

In fact, the long-term residual effects from chlorine are becoming such a health hazard that the American Public Health Association is urging the American paper industry to stop using chlorine.

The U.S. Environmental Protection Agency (EPA) has found dioxin (a toxic byproduct of chlorine) to be 300,000 times more potent as a carcinogen than DDT.

Healthy & Natural speaks with Stephen Ashkin, director of product development and environmental affairs at Seventh Generation, a manufacturer of green, nontoxic cleaning products.

Although he has a degree in chemistry, Ashkin gained most of his practical knowledge and experience through direct contact in the chemical industry. He literally grew up in the laboratory of his parent's cleaning products manufacturing company. Ashkin chaired the American Society for Testing and Materials' task force that wrote the national cleaning standard for commercial and institutional buildings. He has also chaired President Clinton's Green Chemistry Challenge Task Force. Ashkin is acting advisor for a number of EPA programs including the Indoor Environment Division. He has published numerous articles on environmentally preferable products and is a very popular conference speaker.

### **Q: Does chlorine occur naturally?**

Typically chlorine does not normally occur in the environment except as a yellow gas on rare occasions. It's a manufactured substance produced through an industrial process. An electrical current is passed through salt water producing chlorine and caustic soda.

### **Q: Is chlorine very toxic?**

This is where this topic gets very interesting. Many people argue that chlorine is basically safe-that it breaks down into harmless salt and water. Well, that's true-in a laboratory test tube under very controlled conditions.

The real issue is not just how toxic chlorine itself is but how the unintended byproducts



## The Dangers of Chlorine

of chlorine (organochlorines and dioxins) remain in the environment. They are persistent in the environment; they do not break down readily and therefore bio-accumulate.

### **Q: Is there a chlorine pollution problem?**

One of the largest uses of chlorine is in the paper industry. Chlorine is first used to break down the lignan that holds the wood fibers together. Then chlorine is used to bleach the paper to make it white.

The effluent or wastewater containing dioxins and other organochlorines are then dumped into streams and waterways. These ingredients are highly toxic and carcinogenic. Once in the waste stream, they come into contact with other organic materials and surfactants and combine to form a host of extremely toxic organic chemicals.

A chain of events occurs: The water becomes polluted; the fish become contaminated; animals eat the fish and people eat the contaminated animals and fish.

This can create a very serious health problem; the dioxins and other toxic chemicals, when consumed, accumulate in the fatty tissues.

These contaminants are also hormone disrupters because they mimic estrogen. The EPA has observed and documented hormonal imbalance, suppressed immune systems, reproductive infertility and alterations in fetal development of animals. In viewing the big picture, these factors are perhaps the most frightening results from the widespread use of chlorine.

### **Q: How widespread is chlorine contamination?**

It is so widespread that it would be difficult to find any human being who does not have detectable levels of dioxin in his/her blood.

While we know that chlorine is a substantial environmental problem caused by the paper industry, household bleach and cleaners containing chlorine also pose a serious health risk.

For instance, in 1997, 217,989 calls to the Poison Control Center concerned household cleaners. Of those calls, 54,453 were about chlorine bleach and 7,570 were for chlorine disinfectants. So, that means that 28.4 percent of all calls were related to poisonings by chlorine products. What's even more important, most of those calls were about children under 6 years old.

### **Q: What can happen if these chemicals get into our bodies?**

Our bodies are very good at metabolizing many things. Through special enzymes, our bodies are able to rid themselves of many environmental toxic substances that we





## The Dangers of Chlorine

come into contact with daily. However, dioxins (and other organochlorine compounds) aren't included. Even if we are exposed to very low levels, dioxins remain in the body and accumulate.

The EPA is now saying that this is soon to become a major health risk problem. The cumulative effects of dioxin in humans have been linked to:

- birth defects**
- cancer**
- reproductive disorders**
- immune system breakdown**

### **Q: Should chlorine be used in our public water supply?**

The alternative question would be, should we drink contaminated water? The answer, of course, would be no. It's very important that our water is sanitized. Years ago, there were very few alternatives. However, today, while chlorine is a very effective (and cheap) sanitizer, many scientists are recognizing some serious side effects from chlorine.

Today, our technology is getting to the point where, I hope, we will look into a better means of sanitizing our drinking water. This will not be easy because one of the biggest advantages (and ultimately the biggest disadvantage) of using chlorine is the fact that chlorine doesn't break down.

Water can be treated with chlorine at the filtration plant and 10 miles away the chlorine is persistent enough to remain in the water and pipes when it reaches the home. There exist many other ingredients that are good sanitizers, but they break down quickly, and the water would become contaminated by the time it reaches someone's home.

We may have a problem if we need to sanitize via a chemical additive. It becomes a sort of oxymoron: chemicals that are persistent also tend to be toxic. The ultimate solution may be to have home-based water filtration/sanitizing systems. This would eliminate the problem of trying to prevent hundreds of miles of pipes, installed a hundred years ago, from contaminating the water.

### **Q: Are there safe, effective alternatives to chlorine as a bleaching agent and disinfectant?**

Absolutely! Primarily, hydrogen peroxide is available to the paper industry and to the soap industry as a bleaching agent. Another new technology uses ozone. Other non-chlorinated household cleaning products, readily available to the consumer, achieve the same bleaching and disinfecting results as chlorine but are nontoxic.

I don't understand why anyone would want to use chlorine products anyway. Chlorine is



## The Dangers of Chlorine

a respiratory irritant and when mixed with other common household products, it gives off a toxic gas.

### **Q: What can we do to make a difference?**

We could request and purchase processed chlorine-free paper, not just in writing paper but in paper towels, napkins, tissues, and toilet paper. It's a vote for our environment and our health. It may seem to be a small thing, but collectively it really can make a substantial difference.

We need to realize that the technology in the chemical industry has changed as dramatically as in the computer industry. We no longer need to use harmful substances simply because they worked for our grandparents. The technology in the chemical industry is allowing us to replace many of these toxic ingredients with others that are not only nontoxic but have renewable resources and many environmental benefits. It's a major educational process for consumers to understand that they, through their buying choices, can make a difference. Did you know that only about 20 percent of shoppers buy their household products in natural food stores?

What that says to me is that while consumers recognize the importance of buying supplements and organic foods, they don't recognize the same environmental and health benefits associated with buying chlorine-free paper and other nontoxic cleaners.

### **Chlorine Facts**

Dioxin, a chemical byproduct of the manufacturing of chlorinebleached paper, is believed to be the single most carcinogenic chemical known to science.

When you open the door of your dishwasher after washing, toxic volatized chlorine from dish detergent and tap water is released into the air.

Thanks to chlorine pollution, Americans ingest a daily amount of dioxin that is already 300 to 600 times greater than the EPA's so-called "safe" dose.

The US Environmental Protection Agency has found dioxin to be 300,000 times more potent as a carcinogen than DDT.

Dioxin has been linked to endometriosis, immune system impairment, diabetes, neurotoxicity, birth defects, decreased fertility, and reproductive dysfunction in both women and men.

Studies show that 40-70 percent of the dioxin in bleached coffee filters can leach into your coffee; dioxin found in paper milk cartons also leaches into the milk you drink. Cancer-causing chemicals like chlorine found in many household products such as coffee filters, disposable diapers, paper towels, and bathroom tissue are readily absorbed through the skin.

Source: <http://www.mercola.com/display/router.aspx?docid=25412>



## Mercury Content of Selected Cleaning Products

### Why Worry About Mercury

Mercury is an extremely toxic substance and is used in many products and activities. In the past, mercury was used for everything from thermometers to paint to hair bleach. It has been well documented that elemental mercury is persistent in the environment and bioaccumulates in the food chain. Therefore, the presence of elemental mercury in the environment always raises a concern. Mercury is still used in a variety of products today although in many cases there are mercury-free alternatives. When it is necessary to use mercury or mercury is already present in a product it must be handled properly.

### Health Impacts of Mercury Exposure:

Mercury is listed on the EPA's Top 20 Hazardous Substance list. All forms of mercury are toxic to humans, but the various forms of organic and inorganic mercury have different toxicity. Generally, organic forms are much more toxic than inorganic forms. Exposure to mercury occurs from breathing contaminated air, ingesting contaminated water and food, and having dental and medical treatments. Mercury, at high levels, may damage the brain, kidneys, and developing fetus.

The mercury-cell process is one of the processes that may be used to manufacture common ingredients of cleaners and degreasers: sodium hydroxide, potassium hydroxide, chlorine and hydrochloric acid. When these chemicals are used to make other products, such as bleach or soaps, mercury contamination can be introduced in the final product. The Massachusetts Water Resources Authority (MWRA) and Medical, Academic and Scientific Community Organization, Inc. (MASCO), through a public-private partnership called the MWRA/MASCO Mercury Work Group, performed analyses on some of these products. Testing of the products was limited and many common cleaning products have not been tested. The data should not be used as a substitute for testing specific products/chemicals.

See Content Table, next page.



## Mercury Content of Selected Cleaning Products

<b>Product</b>	<b>Mercury Content (ppb)</b>
Ajax Powder	0.17
Comet Cleaner	0.15
Lysol Direct	<0.011
Soft Scrub	<0.013
Alconox Soap	0.004 mg/kg, 0.005 mg/kg, <0.0025 mg/kg (3 tests)
Derm Scrub	<5.0, <2.5 (2 tests)
Dove Soap	0.0027
Ivory Dishwashing liquid	0.061
Joy Dishwashing Liquid	<0.01
Murphy's Oil Soap	<0.012
Soft Cide Soap (Baxter)	8.1
Sparkleen Detergent	0.0086
Sunlight Dishwashing Detergent	<0.011



# ***Cleaning Products Can Harm Your Children***

The symptoms of persistent wheezing in young children may be linked to cleaning products they were exposed to while in the womb. Research showed that 10 percent of the children born into families who used cleaning products such as bleach and carpet cleaners were twice as likely to battle wheezing problems than those who were exposed to cleaning products the least.

A study involving almost 14,000 children was conducted to find out if there was a link between prenatal exposure to cleaning supplies and wheezing.



## **The 10 Most Common Cleaning Disinfectants Used by Pregnant Women**

- ⊙ **Bleach**
- ⊙ **Carpet Cleaner**
- ⊙ **Dry Cleaning Fluid**
- ⊙ **Aerosols**
- ⊙ **Turpentine/White Spirit**
- ⊙ **Air Fresheners**
- ⊙ **Paint Stripper**
- ⊙ **Paint or Varnish**
- ⊙ **Pesticide/Insecticides**
- ⊙ **Window Cleaner**

The children in the study were followed until they reached 3-and-a-half years of age. Results from the study revealed that the babies who were exposed to these chemicals most frequently were more likely to develop persistent wheezing as young children. The relationship between exposure to the cleaning products and wheezing was the same despite environmental factors such as parental smoking, damp housing and family history of asthma.

Although these findings haven't confirmed that these chemicals have caused an increase in the number of asthma cases, one expert stated there was growing evidence that environmental exposure at an early age might contribute to the development of asthma.

Other experts view this study as a reminder to pay closer attention to the indoor air quality we breathe as it might play a big factor in the health of children's lungs.

**BBC News December 23, 2004**



## **Pollution 'putting millions of children at brain damage risk'**

BY DAVID ROSE

Millions of children throughout the world may have suffered brain damage as a result of industrial pollution, researchers say.

Common pollutants may be causing a “silent pandemic” of neurodevelopmental disorders by impairing the brain development of fetuses and infants, scientists writing today in *The Lancet* medical journal say.

Potential effects of exposure to even tiny amounts of toxic chemicals include lower IQ scores and conditions such as autism, attention deficit disorder, and cerebral palsy.

One in six children is thought to have some kind of developmental disability, but the exact causes are largely unknown.

The American and Danish researchers say that lead, methylmercury, arsenic and solvents such as ethanol and toluene are among 202 industrial and agricultural chemicals with potential to damage the brain. But these are likely to be the “tip of a very large iceberg” of potentially noxious chemicals, they write.

More than 1,000 chemicals are known to be neurotoxic in animals, and are also likely to be harmful to humans, especially during the vulnerable phases of development that begin during pregnancy and can extend as late as the onset of adolescence.

Other substances that could prove to be toxic in excessive amounts include fluoride, a common additive in drinking water and toothpaste, the researchers say.

In the EU, 100,000 chemicals were registered for commercial use in 1981, and in the US, 80,000 are registered. Yet fewer than half have been subjected to even token laboratory testing, the researchers say, and in 80 per cent of cases there was no information about the danger to children.

Although new chemicals are more rigorously tested, access to data could be restricted for commercial reasons.

The researchers are calling for much tighter worldwide controls on chemicals, and a “precautionary approach” to testing. In the EU, a new testing programme called Reach is planned that will enforce tighter controls. But the scientists say that this does not go far enough, since it fails to emphasise the importance of testing chemicals for damage that they may cause to the developing brain.



Pollution  
'putting millions of children at  
brain damage risk'  
BY DAVID ROSE

Philippe Grandjean, from the University of Southern Denmark in Winslowparken, who co-wrote the study said: "Only a few substances, such as lead and mercury, are controlled with the purpose of protecting children.

"The 200 other chemicals that are known to be toxic to the human brain are not regulated to prevent adverse effects on the foetus or a small child."

Dr Grandjean and his co-author, Philip Landrigan, from the Mount Sinai School of Medicine in New York, trawled a range of scientific data sources to compile their evidence. Five substances for which sufficient toxicity evidence exist were examined in detail — lead, methylmercury, arsenic, polychlorinated biphenyls (PCBs) and toluene.

For example, virtually all children born in industrialised countries between 1960 and 1980 must have been exposed to lead from petrol, the researchers say. Based on what is known about lead's toxic effects, this may have reduced the number of people with IQ scores of 130 and above by more than half, and increased the number of those with scores of less than 70.

Other results of lead exposure included shortened attention span, slowed motor coordination and heightened aggressiveness. In later life, early damage from lead can increase the risk of Parkinson's and other neurodegenerative diseases.

Pinning down the effects of industrial chemical pollution is extremely difficult because they may not produce symptoms for several years or even decades, the scientists say.

Writing in the online version of The Lancet, the scientists conclude: "The combined evidence suggests that neurodevelopmental disorders caused by industrial chemicals has created a silent pandemic in modern society."

Copyright 2006 Times Newspapers Ltd.





# GREEN RESIDENTIAL CLEANING

Product #290

## MINERAL - X

Ready-to-use Rust / Soap Scum  
Water Scale Remover

Safer replacement for:  
\*Tilex® Soap Scum Remover / \*Naval Jelly®

**MINERAL-X** is a powerful, reduced toxicity alternative which removes rust, hard water, scale, lime, soap scum, mold, and mildew stains and beer-milk-urine salts. It is non-corrosive to skin, non-fuming, and will not pit, streak or blacken stainless or aluminum. Removes tough soap scum on contact. Just wipe dulling films away!

**MINERAL-X** is safe for most bathroom surfaces including bathtubs, glass walls and shower doors, glazed ceramic tiles, toilets, countertops, showers, sinks, and metal fixtures. It can also be used on aluminum, brass, brick, chrome, concrete, copper, fiberglass, grout, porcelain, stainless steel, terrazzo, and tubs without deep scrubbing. Dissolves Rust Stains.

- Cuts through Dulling Films FAST!
- NO scrubbing required.
- Non-abrasive formula will not scratch.
- Contains NO Chlorine Bleach.

DO NOT USE ON MARBLE OR POLISHED GRANITE SURFACES .

Packaging: 32 oz. (U.S. quart) Bottles  
(With spray head)



### ENVIRONMENTALLY PREFERABLE PRODUCTS

For individual problems or questions please call our Toll-Free number: 1800-596-3350

"TILEX" is a registered product name for The Clorox Corporation, Oakland, California 94612. / "NAVAL JELLY" is a registered product name for Naval Jelly Company Inc., Kansas City MO 64105.

# Health and Safety Data

## - MINERAL-X -

### Hazardous Identification

Usage of the product according to the manufacturer labeling poses no health hazards.  
Ingredient(s): **Carbamide Hydrochloride <4%** (CAS# 506-89-8)

### First Aid Measures

#### Health Hazards:

EYES: Yes  
SKIN: Yes  
INHALATION: Yes  
INGESTION: Yes

#### Signs and Symptoms:

EYES: Avoid contact with eyes, may cause moderate irritation.  
SKIN: Contact with skin may cause minor irritation if left on skin for long periods of time. Person with present skin disorder may be more susceptible to irritation. Avoid contact with skin or clothing.  
INHALATION: May irritate respiratory tract in inhaled as a mist.  
INGESTION: May cause stomach ache or nausea. Avoid direct contamination with food.

**Medical Conditions Generally Aggravated by Exposure:** None known.

#### Emergency and First Aid Procedures:

EYES: Hold eyelids open and flush with a steady gentle stream of water for 15 minutes holding eyelids apart to guarantee complete irrigation. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. If irritation persists, seek medical attention.  
SKIN: If irritation occurs, rinse thoroughly with water for at least 15 minutes. Apply and rub in moisturizing cream. If irritation persists, seek medical attention. Use of rubber gloves is recommended for extremely sensitive skin.  
INHALATION: If dizziness or faintness occurs, remove to fresh air.  
INGESTION: If ingested, drink plenty of water. **DO NOT induce vomiting.** In extreme cases, seek medical attention if accidentally ingested in large quantities.

### Fire fighting Measures

None, product is non-flammable.  
In Case of Extreme Emergency, Use Normal Fire Fighting Procedures, Water Spray, Dry Chemical, Carbon Dioxide, or Chemical Foam.

### Toxicological Information

Relatively "Non toxic".

#### Other Precautionary Measures:

KEEP OUT OF REACH OF CHILDREN - KEEP AWAY FROM PETS.

### Environmental Accreditations

ORGANIC BIO-BASED ALTERNATIVE

The exact composition of this material is a trade secret. The information contained herein is correct to the best of our knowledge. The recommendations or suggestions contained in this data sheet are made without guarantee or representation as to results. We suggest that you evaluate these recommendations and suggestions in your own laboratory prior to use. Our responsibility for claims arising from breach of warranty, negligence or otherwise is limited to the purchase price of the material. Freedom to use any patent owned by anyone is not to be inferred from any statement contained herein. WITH REGARD TO THE MATERIAL, SELLER MAKES NO WARRANTY OF ANY KIND WHATEVER, EXPRESSED OR IMPLIED, AND ALL WARRANTIES OR MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE HEREBY DISCLAIMED BY SELLER.

\*"TILEX" is a registered product name for The Clorox Corporation, Oakland, California 94612.

\*\*"NAVAL JELLY" is a registered product name for Naval Jelly Company Inc., Kansas City MO 64105.

**ENVIRONMENTALLY PREFERABLE PRODUCTS**

GREEN  
RESIDENTIAL  
CLEANING

Product #340 - #341  
(Lemon Scent) (Orange Scent)

**PURE CITRUS**  
100% Natural Air Freshener/  
Deodorizer  
Safer replacement for:  
\*Glade® / \*\*Wizard®

"PURE CITRUS" 100 % NATURAL Air Freshener / Deodorizer renews any indoor environment through aromatic NATURAL oils extracted from fresh citrus fruits. These pure citrus essential oils eliminate foul odors instantly and naturally leave the air smelling clean and delightful.

Effectively removes bad odors from dampness, garbage, litter boxes, mildew, mold, pets, smoke odors!

- Contains ABSOLUTELY NO Man-made Chemicals.
- Contains ABSOLUTELY NO Artificial Ingredients.
- Contains ABSOLUTELY NO Annoying Perfumes.

Packaging: 7 OZ  
(Non-petrochemical propellant spray can)



**ENVIRONMENTALLY PREFERABLE PRODUCTS**

For individual problems or questions please call our Toll-Free number: 1800-596-3350

\*Glade® is a registered product name for S.C. Johnson & Son, Inc., Racine, Wisconsin 53403. / \*\*Wizard® is a registered product name for Reckitt Benckiser Inc., Parsippany, NJ 07054.

# Health and Safety Data

## - PURE CITRUS -

### Hazardous Identification

Usage of the product according to the manufacturer labeling poses no health hazards.

Ingredient(s): **Essential Citrus Oils (Lemon/Orange) from Real Fruit Peel.**

DO NOT overuse product especially in confined areas. One Spray Goes a Long Way!

### First Aid Measures

#### Health Hazards:

EYES: Yes

SKIN: Yes

INHALATION: Yes

(when overused or abused)

INGESTION: Yes

#### Signs and Symptoms:

EYES: Avoid contact with eyes, may cause irritation.

SKIN: Prolonged Contact with skin may cause irritation.

Person with present skin disorder may be more susceptible to irritation.

INHALATION: Overuse or abuse may cause respiratory irritation or distress.

INGESTION: May Cause Stomach Ache or Nausea.

**Medical Conditions Generally Aggravated by Exposure:** None known.

#### Emergency and First Aid Procedures:

EYES: Hold eyelids open and flush with a steady gentle stream of water for 15 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye until discomfort is relieved. If irritation persists, seek medical attention.

SKIN: If irritation occurs, wash skin with soap and water. Petroleum Jelly may also be applied to relieve extremely sensitive skin from irritation.

INHALATION: Point away from face and spray into air. If dizziness or faintness occurs, remove to fresh air.

INGESTION: If ingested, drink plenty of water or milk. DO NOT induce vomiting. In extreme cases, seek medical attention if accidentally ingested in large quantities.

### Fire fighting Measures

Contents under pressure. DO NOT puncture or incinerate. Flammable. Keep away from heat, sparks, or open flames. Combustible liquid over 125 degrees Fahrenheit. In case of extreme emergency, use normal fire fighting procedures, dry chemical, carbon dioxide, or chemical foam.

### Toxicological Information

Relatively "Non toxic". Does not apply.

#### Other Precautionary Measures:

KEEP OUT OF REACH OF CHILDREN - KEEP AWAY FROM PETS .

### Environmental Accreditations

ORGANIC BIO-BASED ALTERNATIVE - NOT ANIMAL TESTED.

The exact composition of this material is a trade secret. The information contained herein is correct to the best of our knowledge. The recommendations or suggestions contained in this data sheet are made without guarantee or representation as to results. We suggest that you evaluate these recommendations and suggestions in your own laboratory prior to use. Our responsibility for claims arising from breach of warranty, negligence or otherwise is limited to the purchase price of the material. Freedom to use any patent owned by anyone is not to be inferred from any statement contained herein. WITH REGARD TO THE MATERIAL, SELLER MAKES NO WARRANTY OF ANY KIND WHATSOEVER, EXPRESSED OR IMPLIED, AND ALL WARRANTIES OR MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE HEREBY DISCLAIMED BY SELLER.

\* "Glade" is a registered product name for S.C. Johnson & Son, Inc., Racine, Wisconsin 53403.

\*\* "Wizard" is a registered product name for Reckitt Benckiser Inc., Parsippany, NJ 07054.

**ENVIRONMENTALLY PREFERABLE PRODUCTS**