

*Natural* **Blue**<sup>®</sup>

**CLEANER & DEGREASER**

# Questions & Answers



**PERMATEX<sup>®</sup>**  
**INDUSTRIAL**

# Worker Safety and Environmental Questions & Answers

## 1. Is Natural Blue non-toxic?

Yes, Natural Blue is defined as non-toxic through oral and dermal routes based on independent laboratory testing conducted in accordance with the standards of the Toxic Substance Control Act (TSCA).

Natural Blue does not contain any ingredients listed as carcinogens by the National Toxicological Program (NTP), International Agency For Research On Cancer (IARC), or the Occupational Safety & Health Administration (OSHA).

NATURAL BLUE DOES NOT CONTAIN BUTYL CELLOSOLVE.

## 2. Is Natural Blue biodegradable?

Yes, Natural Blue passes the European 301D readily biodegradability test which requires that a product degrade over 70% within a 28 day period.

## 3. Is Natural Blue non-flammable?

Yes. Natural Blue is non-flammable.

## 4. What is the V.O.C. content of Natural Blue?

Volatile organic compounds (V.O.C.) are substances, which, because they evaporate into the air, are considered potential air pollutants. V.O.C.s. are not regulated as substances which destroy the ozone layer. **Natural Blue does not contain any ozone depleting ingredients.** Natural Blue has a very low volatile organic compound content. In fully concentrated form, the V.O.C. content is 7.8% and in typical use dilutions it ranges from 0.06% to 3.9%.

## 5. How do I dispose of Natural Blue?

In its unused form, Natural Blue is compatible with biological treatment and can be flushed to sanitary sewers. Once used, however, Natural Blue may contain contaminants such as grease and oil which need treatment prior to discharge into the sewer system. The type of treatment required will depend on the type of contaminant and the quantity of wastewater being generated. Local, state and federal regulations should be followed.

Treatment employed to maximize the use of Natural Blue and minimize wastewater can include:

- a. Removing sludge and soil promptly from cleaning tanks.
- b. Using skimmers or gravity separators to remove free floating oil.
- c. Using membrane filtration systems such as microfilters to remove emulsified oils.

## 6. How do I dispose of Natural Blue containers?

Natural Blue containers are made of high density polyethylene and are coded for recycling. The residual Natural Blue on empty containers is not hazardous for disposal. Natural Blue 275 gallon tote containers are made of biodegradable, recyclable corrugated with a polyethylene liner.

# Comparison With Other Cleaners

## 1. How does Natural Blue compare to solvent-based cleaners?

### Worker & Environmental Issues

Natural Blue does not deplete the ozone layer, has a pleasant pine scent, is non-flammable, biodegradable, and non-toxic. Chlorinated and petroleum solvents have toxicity concerns as well as strong odors which are bothersome to workers. Some, such as kerosene and alcohol are extremely flammable and have storage and transportation restrictions.

Chlorinated solvents such as 1,1,1-trichloroethane deplete the ozone layer and are now being phased out in stages by the Montreal Protocol and the U.S. Clean Air Act. A graduated excise tax is already in effect, and there will be a complete ban of non-essential uses no later than the year 1995. Many plants and local municipalities have already banned its use. Natural Blue contains no ozone depleting compounds.

### Performance

Natural Blue can replace 1,1,1-trichloroethane (common trade names — Cleaning Solvent, Shop Solvent, Safety Solvent) and petroleum based solvents (i.e., mineral spirits, kerosene) for cleaning parts and degreasing machinery.

Several important differences in the application methods of Natural Blue and solvent cleaners are:

1. Solvent cleaners do not require rinsing. Natural Blue requires thorough wiping or rinsing with water to leave a residue-free surface.
2. Natural Blue evaporates dry at a rate similar to water. (Drying equipment can be used to accelerate the drying time.) Solvent-based cleaners will evaporate dry at a faster rate.
3. Natural Blue is conductive and should not be used on equipment that is running.
4. Natural Blue may cause flush-rusting on water sensitive parts such as unprotected steel.
5. Optimum Natural Blue performance, in general, occurs with stronger concentrations, dilution with warm water (150°F to 180°F), agitation of parts or scrubbing, and extended surface contact. For applications where solvent-based cleaning is preferred due to drying or rinsing constraints, we've developed an ozone-safe cleaning solvent. Contact your local representative for more information.

## 2. How does Natural Blue compare to other water-based cleaners?

### Worker & Environmental Issues

Some water-based cleaners contain butyl cellosolve which is toxic to skin and moderately toxic when taken orally. Natural Blue does not contain butyl cellosolve.

Some water-based cleaners are very caustic (high pH), and as a result, can harm skin and eyes. Natural Blue is not caustic with a usable pH ranging from 9.7 to 10.6.

Other water-based cleaners may contain phosphate (as a water conditioner) which encourages plant and algae growth, depletes oxygen levels, and kills fish and animals. Natural Blue does not contain phosphate.

Other water-based cleaners may make misleading biodegradability claims. They degrade only after many years and in certain environmental conditions. Natural Blue passes the stringent European 301D readily biodegradability test in which a product must degrade over 70% after 28 days.

### **Performance**

Some water-based cleaners cannot be mixed with warm water to enhance their effectiveness. Natural Blue can be mixed with cold or hot water allowing its use in hot washers or steam cleaners. Natural Blue is highly concentrated and formulated specifically to remove greases, lubricants, oils, cutting fluids and other soils that are common to industry. Natural Blue has an advanced chemistry consisting of non-hazardous solvents to dissolve grease, surfactants (soaps and fatty acids) to emulsify and carry away soils, and conditioners to prevent hard water deposits.

Some cleaners have a very high pH (>12.5). They are good for caustic cleaning applications such as carbon deposits in ovens, but are not as effective as Natural Blue for removing grease and typical industrial soils. Natural Blue has a pH ranging from 9.7 to 10.6.

Finally, some other water-based cleaners have a pH that is neutral or close to neutral (7-9). These cleaners are simply not effective for industrial cleaning applications, and are even less effective when diluted. Natural Blue cleans economically and effectively even after dilution.

### **3. How does Natural Blue compare to specialized cleaners?**

There's no longer a need for plants to purchase one cleaner for machinery, another for floors and walls, another for work areas, another for windows, another for fleet maintenance etc., etc. The list of specialized cleaners is endless. Natural Blue comes in concentrated form, and can be economically diluted to meet hundreds of different industrial cleaning applications. Natural Blue allows plants to reduce inventory by eliminating many specialized (and often hazardous) cleaners.

## **Typical Applications**

### **1. Who uses Natural Blue Cleaner & Degreaser?**

Any facility that requires an effective, economical cleaner and degreaser that is worker and environmentally responsible. Examples include:

Pharmaceutical companies • food processing plants • manufacturing facilities • electric, water & gas utilities • power spray and janitorial companies • nuclear power plants • correctional facilities • municipalities • hospitals • schools • hotels • pulp and paper mills • waste treatment facilities • mines • oil drilling operations • marine facilities • farms

### **2. Where is Natural Blue used?**

#### **Degreasing Parts Machinery & Equipment:**

Natural Blue is used manually, and in parts washers, hot washers, ionic cleaners, steam cleaners and pressure sprayers to remove grease, lubricants, polishing compounds, cutting fluids, light carbon, food residue, animal fats, wax, grime and other industrial soils.

**Typical Applications:** hydraulic equipment • machinery frames • bearings • tools • dies • enclosures • conveyors • pumps • valves • engines • shafts • lathes • stamping mill shears • compressors • small parts • hoists • pulleys • food processing equipment • presses • exhaust hoods • gears • condensers • coils • tanks

### **Fleet Maintenance:**

Natural Blue removes grease, fuel oils, grime, tar, road salt, soot, light carbon, and stains from vehicle exteriors and interiors. Diluted with up to 100 parts water, Natural Blue cleans windshields, vinyl and cloth upholstery and carpets. Stronger dilutions are used for body cleaning, white wall tires and wheels. Diluted 1:1 with water, Natural Blue degreases engines and parts.

**Typical Applications:** trucks • tractors • trailers • aircraft • railroad cars • buses • taxis • subways • ships • construction equipment • fire trucks • city and state owned vehicles

### **Exterior Cleaning:**

Natural Blue removes grease, grime, oils, soot, and more from building exteriors and outdoor structures. Natural Blue rinses residue free to prepare surfaces for welding and painting.

**Typical Applications:** Exterior siding including masonry • aluminum • vinyl • wood • farm stalls • feeding and milking areas • marine and off shore drilling structures • nuclear power plant facilities • concrete floors • loading ramps and docks • canopies • windows • public driveways and walkways • fork lifts • parking garages • holding tanks • bilges • stadiums • bridges and highway structures • billboards • park equipment

### **Interior Cleaning:**

Natural Blue is used manually and in floor scrubbers and mechanical cleaning equipment to remove industrial soils on any washable surface.

**Typical Applications:** walls • duct work • floors (concrete, marble, ceramic, tile, linoleum) • counter tops and work areas • mirrors and windows • doors • venetian blinds • public seating • exhaust hoods • appliances • woodwork • grout •

## Application Question & Answers

### 1. Is Natural Blue corrosive?

Natural Blue is non-corrosive according to the D.O.T. definition of corrosivity. Natural Blue contains no acids, caustic, salt, sodium hydroxide or other ingredients that will dull or pit a metal finish.

### 2. Are there any rust inhibitors in Natural Blue?

No, rust inhibitors are useful in paints and coatings where the product remains on the surface. Rust inhibitors are generally ineffective in cleaners because they are rinsed or wiped away when the surface is cleaned. Natural Blue may cause flash rusting on water-sensitive parts such as raw steel.

Natural Blue, like any effective degreaser, may remove protective lubricating oils from machinery necessitating the re-lubrication of parts.

### 3. What is the pH of Natural Blue at various dilution levels?

Dilution	pH Value
Full Strength	10.6
1:1	10.6
1:16	10.3
1:32	10.1
1:64	10.0
1:100	9.8
1:128	9.7

### 4. What is the maximum temperature range that Natural Blue will withstand?

Natural Blue will not break down in high temperatures although it will begin to 'boil away' at temperatures greater than 212°F. For removing substances such as tar, Natural Blue is most effective when it mixed with warm (150°F to 180°F) rather than cold water.

### 5. Will Natural Blue foam?

Yes, foaming occurs as a result of the surfactants in Natural Blue emulsifying and carrying away the grease and grime. At higher dilution levels there is less foaming. If foaming becomes excessive in highly agitated cleaning situations, ordinary Carpet Shampoo Defoamant can be added to the solution.

### 6. What surfaces can I clean with Natural Blue?

In general, Natural Blue can be used on any surface that is washable and not harmed by water. Natural Blue may begin to attack painted surfaces when it is diluted with less than 20 parts water and left in contact with the surface for more than 10 minutes. When cleaning asphalt, Natural Blue should be diluted with 4 parts water.

**7. How much should I dilute Natural Blue with water?**

Please refer to the dilution guidelines provided on all Natural Blue packaging. In general, Natural Blue should be diluted with up to 4 parts water for heavy degreasing, to 32 parts water for pressure washing and to 128 parts water for general wipe down cleaning.

We recommend starting at a high concentration of Natural Blue and then progressing to weaker dilutions until the most economical level of acceptable cleaning is achieved.

**8. Can Natural Blue be used in mechanical cleaning equipment?**

Yes, Natural Blue is ideal for dip tanks, pressure sprayers, steam cleaners, foam sprayers, floor scrubbers, tumblers, and any other equipment where water based solutions can be used. Natural Blue should not be used in vapor degreasing equipment designed for solvent cleaners.

**9. Does Natural Blue leave a residue free surface?**

Yes, Natural Blue rinses clean with water, leaving a residue free surface for painting, welding, and plating.

**10. Is Natural Blue U.S.D.A. authorized?**

Yes, Natural Blue is authorized for use in federally inspected meat and poultry plants and has a C-1 category code. Natural Blue removes soils commonly found on floors, walls, and equipment in food processing plants. It will emulsify animal fats in a 2% concentration mixed with warm water.

**11. Is Natural Blue in the trigger spray bottle a concentrated or diluted solution?**

Natural Blue comes in concentrated form in all packages, including the 24 fl. oz. trigger spray bottles. It can be conveniently used full strength or diluted up to 1:4 for machinery and other heavy degreasing applications. Gallon containers of Natural Blue can be used to economically refill empty trigger spray bottles.

**12. What soils cannot be removed with Natural Blue?**

Natural Blue will not remove heavy carbon deposits, mineral deposits, or rust. Instead, use Permatex® Enviro-Safe® Carb & Choke Cleaner for heavy carbon removal and Permatex® Naval Jelly Rust Remover for removing hard water deposits and rust.

**13. Does Natural Blue contain any silicates?**

No. Natural Blue does not contain silicates.