



# PINE-SHOWER™ Surface & Equipment Cleaner 1502



## Introduction



Leveraging the cleaning power of pine, Pine-Shower quickly removes flux residues, grease and other soils, and leaves a non-oily finish. Safe on ESD mats, work benches and equipment surfaces.

Does not contain butyl cellosolve, which is common in many degreasers and surface cleaners, and has potential negative health effects. Under California guidelines (CARB), Pine-Shower has zero VOC, and has a less than 3% VOC under EPA guidelines.

Pine-Shower is economical and considered ready-to-use, but can be diluted for light surface and equipment cleaning. Pine-Shower™ Cleaner is fully compliant with CARB (California Air Resource Board) requirements.

Also compliant with European REACH (Registration, Evaluation, Authorization & Restriction of Chemicals) and WEEE (Waste Electrical and Electronic Equipment Directive) initiatives. It does not contain RoHS (Restriction of Hazardous Substances) restricted substances, SVHC (Substances of Very High Concern) list substances, or halides.

### Features / Benefits

- Clean flux and oils from equipment & surfaces
- Concentrated and dillutable
- Non-flammable
- Halide-free – no ionic contamination
- pH in neutral range – non-corrosive
- Safe on most plastics and painted surfaces
- Biodegradable
- Low VOC, zero GWP
- Non-ozone depleting

### Applications

- Removal of heavy greases and oils
- Cleaning on and around heavy machinery
- Cleaning shelves and other surfaces

### Dilution Instructions

- **Full strength** – Caked-on grease (e.g. compressors, engines, etc.), grills\*, oil stains\*
- **10 parts water : 1 part Pine-Shower** – Greasy tools, floor (e.g. concrete) stains\*, vents, heavily stained (food) appliances\*, scuff marks on doors, heavy grease on wheels
- **30-50 parts water : 1 part Pine-Shower** – Chrome fittings, stainless steel, very light general cleaning

\* If on food processing equipment, must be rinsed thoroughly to avoid undesirable residues.

**TECHSPRAY RENEW™** is a brand that represents **High Performance Eco-Cleaning™**. Techspray® has applied our expertise in solvent cleaning to formulate some of the most effective eco-friendly cleaners on the market. Performance is our top priority, using the best “green” solutions as they become available. We all are at the cusp of the ongoing movement toward sustainable products, packaging, and processes. It is Techspray’s intention to stay at the cutting-edge while keeping our products powerful and cost effective.

### Directions

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- Spray and saturate the soiled area. Let soak for 30-60 seconds depending on thickness of the grease.
- Using a lint-free wipe (we recommend Techspray 2364-50 or 2365-300 wipes), wipe lightly at first to allow cleaning agent to break down residues.
- Continue to wipe in a circular motion until the grease or oil is fully removed.
- For thick greases, reapplication may be needed.
- On walking surfaces, mop thoroughly after cleaning.
- Material is easily rinsed by wiping with water dampened cloth.
- Dispose of soiled wipe as appropriate depending on the type of material removed.

### Chemical Properties

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*For Chemical Composition, refer to MSDS.*

- EXPOSURE LIMIT: Limits on components not established.  
Manufacturer’s recommendation 1000 ppm.
- PHYSICAL STATE: Liquid
- ODOR: Mild pine scent
- APPEARANCE: Light green, soapy liquid
- pH: 7 to 8
- BOILING POINT : 212°F (100°C)
- FLASHPOINT AND METHOD (TAG Closed Cup): None to boiling point
- SOLUBILITY IN WATER: Fully miscible
- DENSITY: ~1.00 at 25°C
- VOC (by wt): 2% by wt (EPA), 0% (CARB)

## Performance

*Tested according to modified MIL-PRF-29608 4.59 standards:*

*Soil is applied to cleaning coupons, sprayed with cleaning fluid, allowed to sit 15-seconds, then a poly-cellulose wipe is dragged across one time using a weighted dowel to maintain consistent pressure. Percentage refers to the amount of soil (by weight) removed from stainless steel test coupon.*

<b>SAMPLE ID</b>	<b>CONCENTRATION</b>	<b>SOIL</b>	<b>CLEANING EFFICIENCY</b>
1502 Pine-Shower	100%	Lube/Soil Blend*	85%
1502 Pine-Shower	50%	Lube/Soil Blend*	64%
1502 Pine-Shower	25%	Lube/Soil Blend*	57%
1500 Eco-Shower	100%	Lube/Soil Blend*	93%
1500 Eco-Shower	50%	Lube/Soil Blend*	75%
1500 Eco-Shower	25%	Lube/Soil Blend*	60%
1505 Eco-Shine	100%	Lube/Soil Blend*	65%
Simple Green	100%	Lube/Soil Blend*	75%
Simple Green	50%	Lube/Soil Blend*	50%
Simple Green	25%	Lube/Soil Blend*	38%
409 All-Purpose Cleaner	100%	Lube/Soil Blend*	36%
Windex Original	100%	Lube/Soil Blend*	62%
Hydroforce	100%	Lube/Soil Blend*	90%
Control dry wipe		Lube/Soil Blend*	29%
Control H2O wet wipe		Lube/Soil Blend*	42%

\* *Composition of lube/soil blend: 2 parts Mystik #2, 2 parts Lubriplate #1242, 2 parts Slick 50 #1, 1 part Lubriplate 80W-140, 1 part Silicone TBF9-350, 1 part soil.*

## Compatibility

### ESD Mats & Surfaces

5-day exposure test at room temperature had shown no surface degradation, drying, cracking or increase of resistivity.

### Metals

*Test method: 15 minute immersion at room temperature in sealed jar, remove, wipe dry, and make observations. Observations made immediately after removal and drying, and 1 hour later.*

<b>Material</b>	<b>Compatibility</b>
<b>Brass foil</b>	Excellent
<b>Copper foil</b>	Excellent
<b>Nickel 200</b>	Excellent
<b>Aluminum 6061</b>	Excellent
<b>Aluminum 2024</b>	Excellent
<b>Anodized aluminum</b>	Excellent
<b>Stainless Steel 316</b>	Excellent
<b>Stainless Steel 304</b>	Excellent
<b>Mild carbon steel</b>	Excellent
<b>Galvanized Steel</b>	Excellent

*Note: Pine-Shower™ is a water-based formula, so will encourage oxidation with prolonged exposure to iron, steel, and other susceptible metals.*

## Plastics

Test method: Tested as bulk unstressed coupons, and the following immersion times for the base chemistry: 1 minute, 5 minutes, and 15 minutes.

Material	Compatibility	Material	Compatibility
ABS	Excellent	PMMA	Good (1)
Nylon	Excellent	POM	Excellent
Lexan	Excellent	PP	Excellent
HDPE	Excellent	PS	Good (1)
LDPE	Excellent	PTFE	Excellent
C. E. Phenolic	Excellent	PVC	Excellent

1 = Slight softening after 15 minutes of exposure.

## Environmental Policy

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Techspray® is committed to developing products to ensure a safer and cleaner environment. We will continue to meet and sustain the regulations of all federal, state and local government agencies.

## Packaging and Availability

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Pine-Shower™ Cleaner available in the following sizes:

1502-QT	1 quart (0.95L) w/ trigger sprayer
1502-G	1 gallon (3.8L) in plastic jug
1502-5G	5 gallon (19L) in plastic tub

Available as special order, call for pricing:

1502-54G	54 gallon (205L) in plastic drum
1502-275G	275 gallon (1,045L)

## Resources

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Techspray® products are supported by global sales, technical and customer services resources.

For additional technical information on this product or other Techspray® products in the United States, call the technical sales department at 800-858-4043, email [tsales@techspray.com](mailto:tsales@techspray.com) or visit our web site at: [www.techspray.com](http://www.techspray.com).

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