

CleanSafe® C3

Strong Enough to Clean a Locomotive or Degrease an Engine
Highly Effective Road Film Remover
Industrial Cleaner

About our Company

Additive Technologies' industrial cleaning products are based on leading-edge technology developed in our laboratories. Our cleaning products are based on an effective proprietary mixture of non-hazardous surfactants and have a low level of aggressiveness to human skin, contain no excess caustics or acids, no solvents or VOCs, and are not subject to regulation by the DOT, EPA, SARA, or CERCLA.

Although the products are friendly to people, construction materials and the environment, they are tough on dirt and oil. Their superior effectiveness as cleaners is due in large part to their impressive versatility. The cleaners will remove both oil-soluble and water-soluble soils, including organic and inorganic matter, oil, grease, grime, soot, and exhaust stains, road film, and much more.

The **CleanSafe** formulations were developed as heavy-duty, but non-toxic, cleaners for the railroad industry. Locomotives are very difficult to clean and the railroads had not found a product that was environmentally safe, and would satisfactorily clean using brushless locomotive washing facilities or in hand washing operations.

Further product testing indicated that **CleanSafe** would make an outstanding general purpose cleaner and degreaser. CleanSafe was tested on garage and warehouse floors, automobile engines, trucks, exhaust stacks, shower stalls, carpets, ovens, stoves, clothing, and many other applications. The results indicated that CleanSafe did a much better job than the leading brands on the market.

EFFECTIVE

CleanSafe C3 was developed as a more versatile version of our original CleanSafe 100 general purpose cleaning products, but with an emphasis on **FAST CLEANING ACTION** and the removal of **ROAD FILM**. While the original product was developed to clean railroad locomotives, CleanSafe C3 was designed specifically for automatic washing facilities that allow limited time for the cleaner to function before rinsing. **CleanSafe C3** removes the grease, oil, soot and road film in just minutes without damaging the underlying paint or metal. Importantly, its cleaning process is both people-friendly and environmentally-friendly.

SAFE

CleanSafe C3 products do not contain caustics, acids, or volatile organic compounds such as d-limonene or terpenes. They are mild in terms of aggressiveness toward human tissue and have very low to no odors and minimal vaporization levels, reducing the problem of worker exposure to fumes. They are biodegradable, non-toxic to the environment and are not DOT regulated.

CLEANSAFE C3 PRODUCT FEATURES:

- **CleanSafe C3** is fast acting and penetrating.
- **CleanSafe C3** dissolves and removes road film, then leaves a temporary layer helping prevent corrosion and minimizing dirt re-build-up.
- **CleanSafe C3** was developed for high capacity wash systems, but can be used for multiple cleaning purposes.
- **CleanSafe C3** contains no DOT- or EPA-regulated ingredients.
- **CleanSafe C3** contains no solvents, terpenes, d-limonene or acids.
- **CleanSafe C3** emulsifies oil and grease efficiently, then demulsifies in a relatively short period of time if allowed to stand undisturbed.
- **CleanSafe C3** has a milder alkaline pH of 10.0-10.5, but is still fast acting and penetrating.

CLEANSAFE C3 PRODUCT BENEFITS:

- Environmentally friendly and biodegradable.
- Removes exhaust stains, soot and road film quickly without leaving shadow stains.
- Removes grease and oil with milder alkaline pH and without solvents, or any hazardous ingredients.
- Self-demulsifies in waste-water treatment facilities, reducing disposal and water treatment chemical costs.
- Works well in both touchless automatic wash systems and spray on/off applications with little or no hand labor.
- Contains no measurable volatile organic content (VOC), allowing it to be used safely indoors or outside.
- Can be used in soft water areas, and in hard water areas it is effective as it contains ingredients which tie up hardness compounds.



Additive Technologies, LLC

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ALL PRODUCTS MADE IN THE USA

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CLEANSAFE®

Non-Hazardous Heavy Duty Cleaner/Degreaser

CLEANSAFE C3-100 is a **CONCENTRATE** and is often ordered where lower levels of dilution are required. This product is often used as is, for heavier uses like parts washing, pre-spotting, or as a vehicle engine degreaser. It is biodegradable and is not DOT regulated.

PRODUCT SPECIFICATIONS

Appearance	Clear or purple liquid
Odor	Mild soap
Flash Point	None
Freezing Point	28°F
Specific Gravity	1.020-1.028
pH	10.0-10.5
Stability	Stable

Product Code:	C3-100
Quantity options:	5 gal. Pail, 55 gal. Drum, 275 gal. Tote, 5,000 gal. Bulk
Quantity options (outside US):	19 L Pail, 205 L Drum, 1000 L Tote, Bulk tank truck (Canada only)
Dye:	Yes
Dye Options:	Purple or custom dye (by customer request)

CLEANSAFE C3-300 is a **SUPER-CONCENTRATED** product developed for high-speed, high capacity automatic washing facilities where the dwell time is limited and freeze protection is required. It can also be used in regular washing facilities, car/bus washes and other uses outlined in the bulletin. It is biodegradable and is not DOT regulated.

CleanSafe C3-300 has all the qualities of the regular Cleansafe C3-100 concentrate. CleanSafe C3-300 can be diluted with water to reach the normal CleanSafe C3-100 strength, which is comparable to other full-strength, heavy-duty cleaners on the market. The regular concentrate is then diluted based on end-use (see next page). To dilute the CleanSafe C3-300 simply add water in the amount of 2 times the volume of CleanSafe C3-300 you are diluting to reach the full-strength CleanSafe concentration (2 parts water : 1 part C3-300).

PRODUCT SPECIFICATIONS

Appearance	Clear or purple liquid
Odor	Mild soap
Flash Point	None
Freezing Point	15°F
Specific Gravity	1.085-1.095
pH	10.0-10.5
Stability	Stable

Product Code:	C3-300
Quantity options:	5 gal. Pail, 55 gal. Drum, 275 gal. Tote, 5,000 gal. Bulk
Quantity options (outside US):	19 L Pail, 205 L Drum, 1000 L Tote, Bulk tank truck (Canada only)
Dye:	Yes
Dye Options:	Purple or custom dye (by customer request)

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CLEANSAFE®

Non-Hazardous Heavy Duty Cleaner/Degreaser

CLEANSAFE C3 is a non-hazardous, environmentally friendly, personnel safe cleaning product that is very effective at tough cleaning jobs which, in the past, could only be handled by aggressive, hazardous products. CleanSafe C3 is particularly effective for removing road film from in-service railroad locomotives, but it also removes the heavy grease, oil, grime and soot. However, as for any cleaner, the equipment used and the cleaning technique employed are important elements of the overall procedure.

CLEANSAFE C3-100 is a **CONCENTRATE** and is often ordered where lower levels of dilution are required. This product is often used as is, for heavier uses like parts washing, pre-spotting, or as a vehicle engine degreaser. It is biodegradable and is not DOT regulated.

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Using CleanSafe C3-100 and CleanSafe C3-300

 <p>Heavy Degreasing Greasy/oily factory equipment, oil delivery vehicles, grimy engines, construction equipment, very dirty shop areas, coal hoppers and locomotives.</p>	 <p>General Degreasing Heavy Cleaning Parts washers, trucks/trailers, machinery, shop floors, shop walls, parts preparation, and construction equipment.</p>	 <p>General Purpose Parts Cleaning Routine work, surface cleaning, floor cleaning, equipment cleaning, and preparation.</p>	 <p>Janitorial Cleaning Household Cleaning Pressure Washing Appliances, toilets, counter tops, floors, general vehicle washing, bathrooms, and soap scum.</p>
<p>CleanSafe C3-100: Full Strength</p>	<p>3: 1 to 10: 1</p>	<p>10: 1 to 30: 1</p>	<p>20: 1 to 40: 1</p>
<p>CleanSafe C3-300: 3: 1</p>	<p>10: 1 to 30: 1</p>	<p>30: 1 to 90: 1</p>	<p>60: 1 to 120: 1</p>

UNION PACIFIC RAILROAD



CleanSafe products have been used by the Union Pacific Railroad system-wide for over 9 years. They are used for applications ranging from hand-cleaning locomotives, to the automated wash racks including the high-speed facilities. In addition, they are also used for general cleaning and degreasing of shop floors, etc. Since the UPRR switched to CleanSafe, there has not been a lost-time injury. It has successfully passed all the testing that the UPRR requires: VOC, waste-water, paint damage testing and more.





Demonstration: Exterior Locomotive Cleaning

CleanSafe C3 being used in a high capacity automatic washing facility.



The Locomotives go through the high-capacity washing facility in under 5 minutes.

Therefore, a very fast-acting and penetrating cleaner is required.

CleanSafe C3 meets these requirements.



Demonstration: Hand-Washing Exterior Locomotive Cleaning

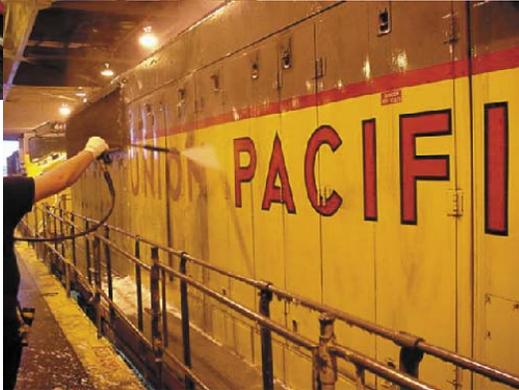


1. Spray-on
CleanSafe using a low pressure sprayer



3. RESULTS:
Before
&
After

2. Rinse off
CleanSafe with a pressure washer



Demonstration: Locomotive Engine Cleaning



Engine cleaning process: operator is applying foam in the background. CleanSafe has already been applied to the engine in the foreground and is self-cleaning the engine.

(continued next page)

CLEANSAFE®

Non-Hazardous Heavy Duty Cleaner/Degreaser

Demonstration: Locomotive Engine Cleaning



Apply CleanSafe on engine with low pressure sprayer



CleanSafe cleaning action as it dwells on engine

CLEANSAFE®

Non-Hazardous Heavy Duty Cleaner/Degreaser



RESULTS: Before (above) & After (below)

