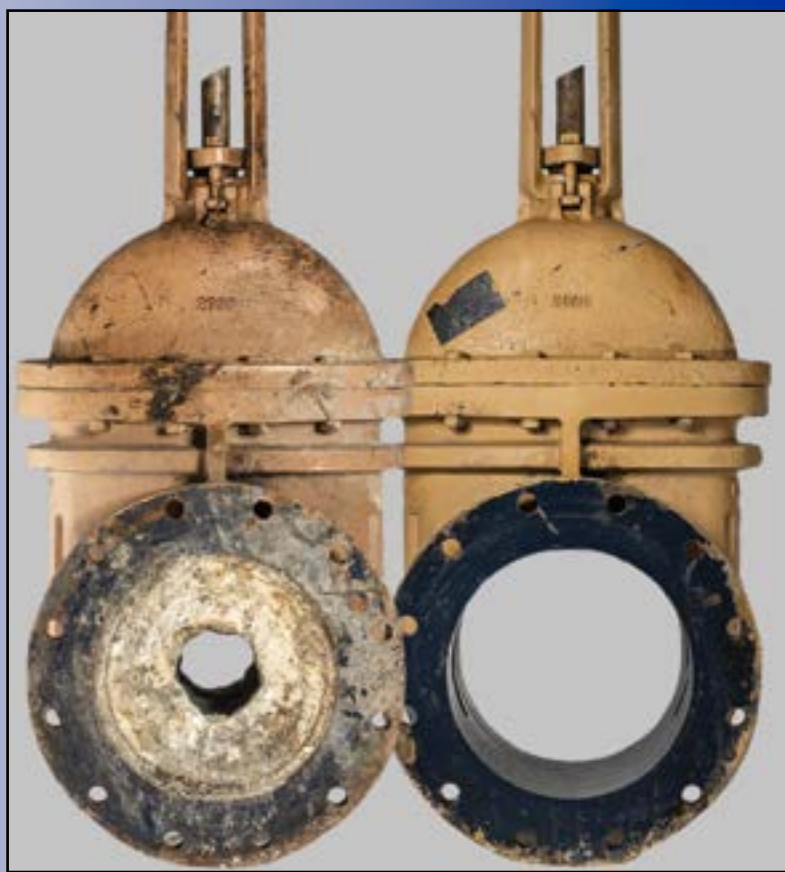
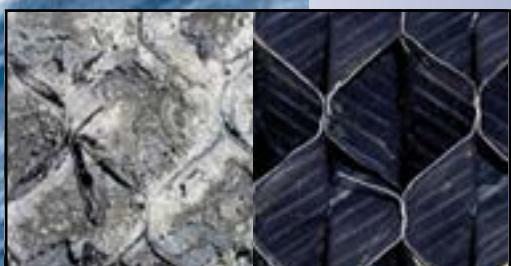


**RYDLYME** dissolves water scale, lime, mud and rust deposits safely, quickly and effectively!



*the solution to your  
water scale problems*

# What is **RYDLYME**?

**RYDLYME** is the trade name of our scientifically formulated descaler. **RYDLYME** is specifically designed to dissolve the toughest water scale, lime, mud and rust deposits from virtually any piece of water-based equipment. This powerful, yet totally safe, liquid descaler is non-toxic, non-injurious, non-flammable, non-hazardous, non-corrosive and BIODEGRADABLE; so **RYDLYME** will not harm your personnel, equipment or our environment!



**RYDLYME** was developed in 1942 and has grown to be the product of choice for customers in nearly all industry categories. **RYDLYME** is an extremely innovative and unique solution fortified with wetting and penetrating agents to actually dissolve deposits into solution, like sugar in coffee. This revolutionary liquid is time tested and proven to be the safest and most cost effective solution for fouled equipment or systems. Thanks to our valued customers, **RYDLYME** is the "World's Leading Biodegradable Descaler"!

**RYDLYME** has been tested (by EPA licensed testing facilities), and proven to be biodegradable, so disposal is not a problem. Even in concentrate (as received) form, it can be flushed down normal plant sewers. **RYDLYME** has accumulated numerous approvals and recommendations in over 75 years of use. **RYDLYME** is certified to NSF/ANSI 60 as a cleaner for drinking water systems and NSF registered for use in beverage, pharmaceutical, bottling, poultry and other food processing plants as well as manufactured in an ISO 9001 facility. For over four generations, countless OEM's have trusted **RYDLYME** for safe and effective use in their equipment.

Only **RYDLYME** does it so SAFELY, SIMPLY, RAPIDLY and ECONOMICALLY!



**RYDLYME** is biodegradable and safe for your equipment, personnel and the environment!

## **RYDLYME IS NON-CORROSIVE**

It will not erode, pit, oxidize or have other deleterious effects on metals or materials such as:

- IRON
- FIBER
- STEEL
- BRASS
- GLASS
- NICKEL
- COPPER
- RUBBER
- PLASTIC
- CERAMIC
- TITANIUM
- STAINLESS

Or other materials found in water-based equipment or systems.



# Why Should You Use **RYDLYME**?

Water scale, lime, mud and rust deposits are a serious problem for virtually all industries who use water as an integral part of their manufacturing and heating/cooling processes. Equipment or systems with clean water passages operate in a designed and effective manner. Once the water-based equipment or systems become fouled with scale, efficiency decreases, energy costs increase and the useful life of equipment is diminished. Failure to address water scale problems in a timely manner runs the serious risk of costly equipment or system shutdowns, repairs, or even replacement.



Fortunately, there is a solution! Periodic **RYDLYME** cleaning will dissolve these deposits into solution restoring efficiency, conserving energy, extending the equipment's useful life and reducing the risk of costly repairs, replacement or plant downtime. Arming your plant and personnel with **RYDLYME** as an integral part of your preventive or predictive maintenance program will provide you with a weapon that is easy to use, efficient and safe. **RYDLYME** cleaning allows equipment or systems to be cleaned without labor intensive dismantling or removal. Some systems can be cleaned on the run and without shutdown. **RYDLYME** cleaning can be performed by utilizing your own personnel, eliminating costly additional outside expenses. **RYDLYME** works quickly and efficiently, with most applications completely clean in a matter of hours. **RYDLYME** is safe enough to hold in your open hand, does not require any neutralizing or pacifying and is free rinsing with water. **RYDLYME** has a pleasant odor and does not exude any obnoxious or toxic vapors when dissolving water scale, lime, or rust deposits.

Visit our website for videos, case studies, news and technical expertise!



**RYDLYME** has been thoroughly tested, approved, and is used extensively by the U.S. Navy. It has become an integral part of their maintenance programs onboard surface ships, submarines and aircraft carriers.

## SUMMARY

Now that you have learned what **RYDLYME** is all about, take a few minutes to think about how and why **RYDLYME** should be a part of your preventive maintenance program.

- ✓ **RYDLYME** is Effective!  
It dissolves approximately 2 lbs. of lime per gallon!
- ✓ **RYDLYME** is Non-corrosive!  
Safe to use on metals found in water systems!
- ✓ **RYDLYME** is Biodegradable!  
It has a very low BOD and can be disposed of down normal plant sewers!
- ✓ **RYDLYME** is Safe!  
It can be held in the open hand without injury!
- ✓ **RYDLYME** is Economical!  
Contact us to perform a **RYDLYME** Cost Savings Analysis of your next application!
- ✓ **RYDLYME** is Approved!  
NSF/ANSI 60, NSF, U.S. Navy and many others!
- ✓ **RYDLYME** is always in Stock!  
Inquire today to receive a free sample and schedule your next preventative maintenance cleaning!

# Who Uses **RYDLYME**?

The following is a brief list of customers, by industry, where **RYDLYME** has proven to be beneficial in maintaining their water based equipment or systems at peak efficiency.

## ■ AUTOMOTIVE

- General Motors
- Chrysler Corporation
- Ford Motor Company
- Hyundai Motor America

**RYDLYME** used on closed circuit cooling, air compressors, heat exchangers, dynamometer test stands, extruders, molding machines, parts washers, electric welder guns.

## ■ BEVERAGES

- Anheuser-Busch
- Pepsi Cola Bottling
- Miller Brewing Company
- Coors Brewing Company

**RYDLYME** used in bottle washers, rinse tanks, heat exchangers, CO2 generators, refrigeration, booster heaters.

## ■ CHEMICALS

- Dow
- Sabic
- Bayer
- DuPont
- BASF Corporation

**RYDLYME** used for cleaning condensers, exchangers, mixers, reactors, jacketed kettles, vacuum pumps, dryers, extruders.

## ■ FOOD

- ADM
- Tyson
- Nestlé
- Cargill
- ConAgra
- Kraft Foods
- General Mills

**RYDLYME** used for low temperature refrigeration & process equipment, cooling towers & evaporative condensers, heat exchangers.

## ■ GOVERNMENT

- NASA
- Pentagon
- White House
- U.S. Armed Forces
- Department of Corrections

**RYDLYME** used on heat exchangers, vacuum furnaces, condensers, evaporators, boilers, cooling towers.

## ■ HVAC

- Daikin Applied
- Ingersoll Rand
- Johnson Controls
- Carrier Corporation
- United Refrigeration

**RYDLYME** used on evaporative condensers, shell & tube condensers, centrifugal chillers, absorption units.

## ■ MANUFACTURING

- GE
- 3M
- Intel
- Boeing
- Lockheed Martin
- S.C. Johnson & Son, Inc.

**RYDLYME** used on closed circuit cooling, vacuum filters, vacuum furnaces, heat exchangers, parts washers, chillers.

## ■ PAPER

- WestRock
- Georgia Pacific
- Domtar Industries
- International Paper
- Kimberly-Clark Corporation

**RYDLYME** used on vacuum pumps, mill & calendar rolls, liquor lines & tanks, closed circuit cooling, evaporators, air compressors, condensers, digesters.

## ■ PHARMACEUTICALS

- AbbVie
- Pfizer, Inc.
- Merck & Co.
- Eli Lilly & Company

**RYDLYME** used on closed circuit cooling, heat exchangers, condensers, reactor vessels, vacuum pumps, stills, sterilizers.

## ■ REFINERIES

- BP
- Total
- Shell
- ExxonMobil
- ConocoPhillips

**RYDLYME** used on condensers, heat exchangers, crackers, converters, compressors, pumps, piping.

## ■ RUBBER

- Michelin
- Veyance Technologies
- Goodyear Tire & Rubber
- Bridgestone / Firestone, Inc.

**RYDLYME** used on Banbury mixers, extruders, tubers, mill & calendar rolls, compressors.

## ■ STEEL & METALS

- Alcoa
- ArcelorMittal
- Kaman Industrial
- U.S. Steel Corporation

**RYDLYME** used on compressors, exchangers, mill rolls, furnaces, smelters, cooling towers, motor coolers, cast house cooling, minimum spangle units.

## ■ UTILITIES

- AEP
- Excelon
- Xcel Energy
- Duke Energy
- Southern Companies

**RYDLYME** used on exchangers, condensers, compressors, closed circuit cooling, cooling towers.

**SOLVERBIO**  
environmental solutions

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**RYDLYME** dissolves waterscale, lime, mud and rust deposits safely, quickly and efficiently!

1. **RYDLYME** is a non-hazardous, non-corrosive, non-injurious, non-toxic, yet fully biodegradable descaler, heavily fortified with wetting and penetrating agents which actually dissolves water scale, lime, mud, rust, and other water formed deposits from water operated equipment.
2. Certified to **NSF/ANSI 60** for use as a cleaner in potable water systems. **NSF Registered** for use in beverage, pharmaceutical, bottling, poultry, and other food processing plants. USFDA has no jurisdiction over the product, since it does not come in direct contact with food.
3. **RYDLYME** is non-corrosive, but the application of **RYDLYME** may expose pre-existing under deposit corrosion (pitting, holes or similar damage) that can result in leaks in pipes, equipment or systems.
4. **RYDLYME** should be used as directed and at any temperature within the operating limits of between 0°F / -18°C and 180°F / 82°C. If the solution does freeze, slush or thicken at the lower operating temperatures, and then thaws, there will be no performance reducing results. Please consult the manufacturer when temperatures above 180°F / 82°C are encountered.
5. The solution does not deteriorate, oxidize, saponify, thicken or lose effectiveness for at least five years.
6. Although almost any chemical reaction will react faster under elevated temperatures, **RYDLYME** should be applied at ambient temperatures (65°F / 18° C to 95°F / 35°C) with full effectiveness and results obtainable.
7. The solution is exothermic, but does not develop a substantial increase in temperature while dissolving water scale, lime, mud, rust or other water formed deposits. However, when **RYDLYME** comes in contact with strong caustics, a significant exothermic reaction could result with temperatures potentially exceeding 140°F / 60°C.
8. **RYDLYME** has the ability to dissolve approximately two pounds (1 Kilo) of calcium carbonate scale per U.S. gallon while at 70°F / 21°C, and in concentrated form. If the **RYDLYME** is diluted, it will still dissolve two pounds per gallon, but will require additional circulating time.
9. The concentrated solution can be held, safely, in the open hand without deleterious affects. However, if irritation occurs, a simple soap and water rinse is all that is required. If irritation persists, please consult a physician.
10. The solution is of a pleasant or characteristic odor, very similar to roasted almonds, and does not exude any obnoxious or toxic vapors.
11. An exception to number 10 is that hazardous vapors may occur when encountering high concentrations of sulfur, chlorine, or liquid TNT. Please contact the manufacturer before proceeding under these circumstances or review the SDS of the chemical that **RYDLYME** may come in contact with for incompatibilities.
12. **RYDLYME** does not corrode, erode, attack, oxidize or have other deleterious affects on virtually any metal or materials commonly found in water systems such as:

**COPPER  
RUBBER**

**BRASS  
STEEL**

**BRONZE  
TITANIUM**

**IRON  
GLASS**

or other materials found in heat exchangers, vacuum pumps, evaporators, condensers, and other water operated equipment when used as directed.

(continued)

13. An exception to number 12 is that when using 100% concentrated (non-diluted) **RYDLYME** on magnesium, zinc, and/or aluminum, it could oxidize or pit. Furthermore, polished chrome and some alloys of stainless steel could become discolored. It is not recommended for use with concentrated solutions. The rule of thumb is that if the alloy is designed for use in a water system (aluminum engine block, aluminum mold, etc.), the alloy should be compatible with the **RYDLYME** solution. Otherwise, it is recommended that the **RYDLYME** be diluted 50% or more with water when cleaning.
14. Before commencing a cleaning job utilizing **RYDLYME**, all flexible or corrugated stainless steel should be temporarily replaced with rubber or similar hosing.
15. Agitating or circulating **RYDLYME** with compressed air is not recommended. Please consult the manufacturer with any questions.
16. It is recommended, but not mandatory, that the **RYDLYME** solution be thoroughly mixed before using. Some settling of a dark precipitate may occur with the majority of the liquid becoming a clear amber color. The use of the phased or non-agitated liquid will have no negative affects upon the performance of the solution.
17. The solution does not require neutralizers and it is free rinsing with water.
18. **RYDLYME** is an electrolyte, as are most cleaning agents. An electrolyte is any liquid that will transfer small electrical currents. Examples: salt water, vinegar, Coca-Cola. An electrolyte may cause plating in some types of equipment. This means a transfer of small amounts of one metal onto another metal according to the galvanic corrosion chart. In some instances, a thin coating of copper may be plated onto a steel drum while circulating an electrolyte such as **RYDLYME**. The only time plating occurs is when two dissimilar metals are in an electrolytic solution.
19. The solution has the ability to dissolve deposits from some equipment while in operation and without shutdown, either through the cooling tower or if auxiliary coolers are incorporated.
20. The solution has the properties to be mailed or shipped by any private or commercial carrier without restrictions. Air carriers for emergency deliveries may ship **RYDLYME** via next day air.
21. The solution is packaged and shipped in single gallon containers, 4x1 gallon cases, 5-gallon jugs, 30 and 55-gallon drums, 330 gallon totes, and tankers.
22. Do not circulate material for more than a six-hour period without consulting the manufacturer. Most **RYDLYME** cleaning applications can be accomplished within an average of two to four hours. Please use material only as directed.
23. **RYDLYME** is designed to be used by itself or diluted with water and water only.
24. **RYDLYME** should be stored in its original or similar HDPE container and properly sealed when not in use.
25. The solution is biodegradable with a BOD value of 16 mg/l. This normally allows the solution to be water flushed down plant sewers. Check with local ordinances and regulations in your area prior to disposal.
26. **RYDLYME** is non-reportable under SARA Title 3: Sections 311/312/313 Categorization. **RYDLYME** does NOT contain any toxic creosols or other hazardous substances not listed in our current SDS. **RYDLYME** does NOT contain any VOC's. **RYDLYME** is not reportable under CERCLA.
27. The foregoing specifications are applicable to our product, **RYDLYME**, when used according to instructions that are available upon request and in NO WAY are intended to cover other uses or applications by the purchaser.

*For additional details regarding the specifications of **RYDLYME**, please visit our website at [www.solvebio.com.au](http://www.solvebio.com.au) or contact the technical department at +61 08 9333 0777.*