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# **At RICKMAN**

**We create defoamer  
chemistry for a better and  
more sustainable future.**

# RICKMAN

Rickman was found in 2013, engaged in production, research and development, sales and service of defoamer. The comprehensive annual capacity can reach 30,000 tons. These products are widely used in pulp and paper, textile, industrial water treatment, paint and ink, oil and gas, agriculture, food, fermentation, industrial cleaning, metal processing and other fields.



At RICKMAN, we create defoamer chemistry for a better and more sustainable future. We believe that our mission is to work closely with our customers, providing them with antifoaming agent solutions enable them to deliver their potential.

**01**

## **Our Purpose**

To solve foam problem and improve efficiency through antifoam solutions.

**02**

## **Our Vision**

To be the global leader in antifoam innovation and build a safer, healthier, more sustainable world.

**03**

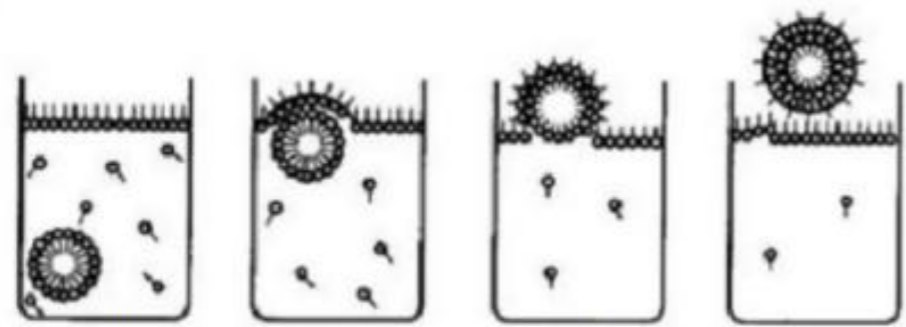
## **Mission**

We strive to build a better and more sustainable world with our partners by solving chemistry problems with the right technology, experience and team.

# Defoamers and Antifoams

## Classifications of foam

- According to the life of the foam, it can be divided into "short foam" with a life span of a few seconds and "durable foam" that can maintain a few days without breaking under the condition of no interference;
- According to the balance between the force of foam generation and foam breaking, it can be divided into "unstable foam" that is constantly approaching the equilibrium state and "stable foam" that is hindered in the equilibrium process;
- According to the aggregation, it can be divided into "bubble dispersion system" with more liquid and less gas and "foam" with more gas and less liquid.



The rise of foaming in a surface activator

## Generation Mechanism and Stability of Foam

Analysis of factors affecting the stability of foam :

(1) Low surface tension.

The lower the surface tension, the easier it is to form foam ;

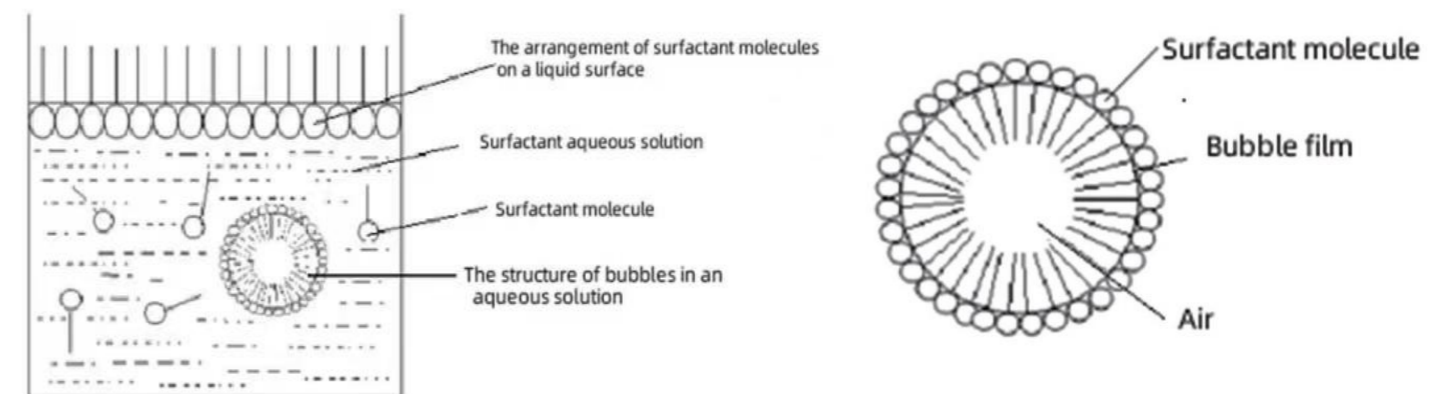
(2) Concentration of surfactants.

The higher concentration of surfactants, the more it accumulates on the surface of the foam, and the stronger the membrane ;

(3) Size of foam itself.

According to the formula  $T=K/D^2$  , T is the life of foam; D is the average diameter of foam; K is the correction coefficient.

As can be seen from the formula, the smaller the foam, the longer the life of the foam, the higher the stability.



## What is foam?

Bubbles and foams are generated by surface action.

Due to the action of surface tension.

The membrane contracts into a ball, forming a bubble. Because of the lifting force, bubbles rise to the liquid surface. When a large amount of bubbles gather on the surface, a foam layer is formed.



# Paint, Coating and Ink



## ○ Foam control agents in a wide range of applications

For many industries, excessive foam is a problem. It can cause vessels to overflow, interfere with processes and packaging, waste material and damage equipment.

Defoamers and Antifoams prevent unwanted foam formation and help solve these challenges efficiently.

Our lineup ranges from products based on silicone, polyether, compound, mineral oil, powder and other silicone free defoamers.

In paint and ink, foam and entrained air can be introduced a coating and ink by stirring and shearing during pigments, polymer grinding and package. Foam can contribute to surface defects, pinhole, eye fish, and final print quality.

Our portfolio of defoamers includes mineral oil , silicone, synthetic non silicone defoamers for those applications.

### **RICKMAN Recommendation:**

**RK-857** is a high effective compound defoamer, which is suitable for water based color paste grinding process, styrene/acrylic acid, poval and water-based epoxy system.

**RK-801** is 25% active high antifoaming defoamer, with good stability and compatibility in water-based paint, ink, printing light oil , wood furniture paint, overprint varnish.

**RK-817** is a water based defoamer, used in water based paint and ink, printing light oil , and overprint varnish.

**RK-873**, is a silicone polyether defoamer, acted as excellent degassing air performance in coating and ink , printing light oil.

**RK-840S** is mainly used in oil based ink.

**RK-170** is a 100% active content , high efficiency with latex paint system. It's widely used in adhesive, water based paint and latex and paper coating & sizing.

**RK-203** is a non silicone defoaming agent and used in textile industry, water based paint and paper coating.

**RK-1107** is a 100% active defoamer, specially designed for emulsion adhesive.

**RK-0036** is a high antifoaming defoamer with 30% content. Low dosage can achieve optimized result in textile printing, general industrial, cooling water treatment, PCB cleaning, adhesive, glove production etc.

**RK-900N** is a high concentrated defoamer emulsion with productivity, and quality, including excellent break foam quickly.

