



Safe Handling of Sal CURB® Liquid Antimicrobial

Introduction

Maintaining the health and safety of livestock and poultry is an important aspect of animal welfare and food safety. To prevent the introduction of disease and human pathogens into the food chain, producers must take a comprehensive approach to biosecurity. Assuring the food these animals consume is free of pathogen contamination, such as *Salmonella* is a must. This is where Sal CURB comes in. Sal CURB is a liquid product containing formaldehyde, which maintains feed and feed ingredients *Salmonella*-negative for up to 21 days. This protection offers peace of mind to producers and feed manufacturers in their biosecurity programs.

Regulatory Requirements

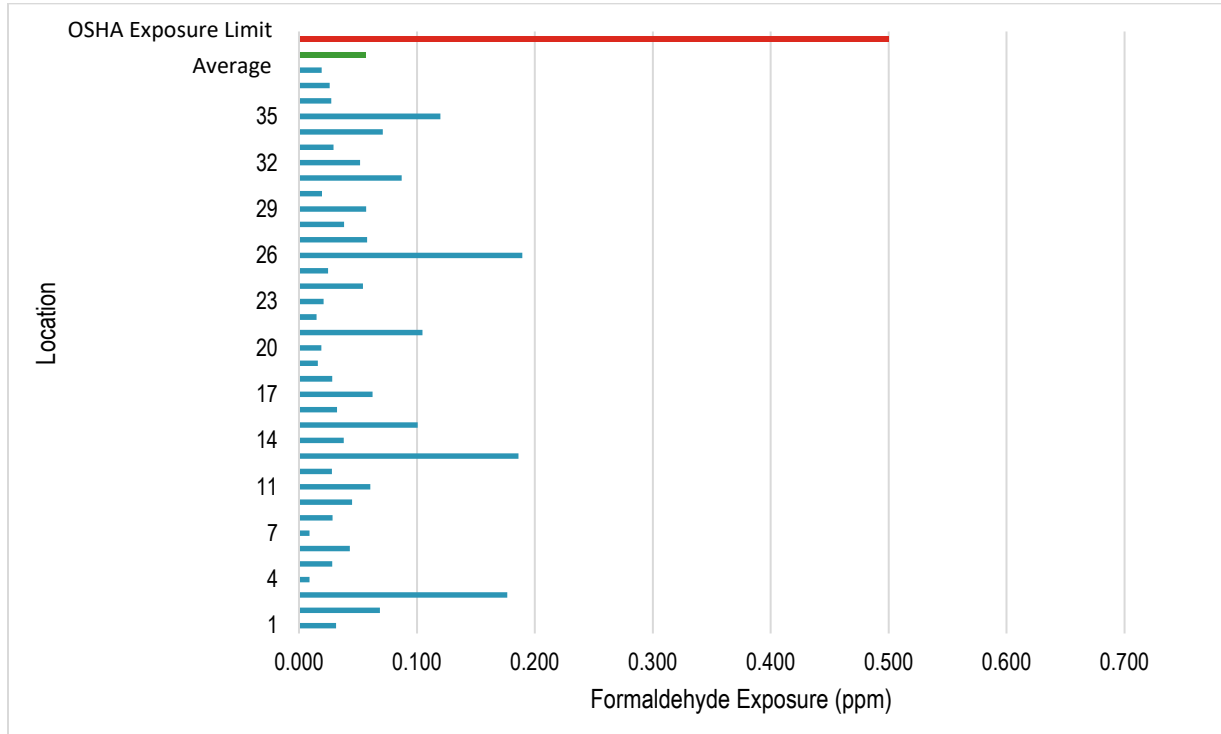
Employee exposure to formaldehyde is regulated by the United States Department of Labor’s Occupational Safety and Health Administration (OSHA), while the United States Environmental Protection Agency (EPA) regulates the release of formaldehyde to the environment. OSHA sets standards on the safe levels of exposure to chemicals and has three employee exposure levels for formaldehyde shown below.¹ Additionally, formaldehyde may fall into other programs such as hazard communication, personal protective equipment, and employee emergency action plans and fire prevention plans. Regulation of formaldehyde by the EPA includes notifications and reporting depending on the facility and quantity of formaldehyde on-site. In the event of a release of formaldehyde, reporting is likely required. This release may be in the form of a spill or an expected release during feed or ingredient manufacturing.

Action Level	}	<ul style="list-style-type: none"> • 0.5 PPM² • Expressed as an 8-hour time weighted average (TWA) • Triggers additional regulatory requirements
Permissible Exposure Limit (PEL)	}	<ul style="list-style-type: none"> • 0.75 PPM² • Expressed as an 8-hour TWA • Highest level of exposure an employee may be exposed to, without incurring the risk of adverse health effects
Short Term Exposure Limit (STEL)	}	<ul style="list-style-type: none"> • 2.0 PPM² • Expressed as a 15 minute TWA • Used for monitoring short term exposures

Track Record of Safety

Employee exposure levels for customers handling Sal CURB is shown below in Figure 1, with the OSHA Action level included for reference. The exposure levels indicated on the graph represents the average of each employee exposure at each location. The average exposure for Sal CURB customers is 0.056 ppm. This level is well below the regulations set forth by OSHA. Kemin takes safety seriously and works alongside customers during all stages of Sal CURB use to establish a safe working environment.

Figure 1. Mean employee exposure to formaldehyde at facilities handling Sal CURB® liquid antimicrobial.³



Process to Safe Handling

At Kemin, we are dedicated to providing a safe work environment for our customers and their employees. To accomplish this requirement, installation of a Sal CURB program includes multiple steps to assure the proper programs and procedures are in place. The first step is to complete a Safety and Regulatory Preparedness Survey, which lays out the federal requirements for handling a formaldehyde product. Prior to installation of equipment, a Safety and Regulatory Training is completed by a Certified Safety Professional. This training focuses on situational awareness to assure employees understand Sal CURB and the hazards. At this time manuals are provided for continual training, and if a respiratory protection plan is in place, respirators may be reimbursed. Following the installation of a Sal CURB program, employee exposure monitoring is conducted, and a scheduled audit program is initiated.



References

1. Occupational Safety and Health Administration. Standard Interpretation October 6, 1995. https://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=INTERPRETATIONS&p_id=24470
2. 29 CFR 1910.1048, Formaldehyde.
3. Kemin Internal Data.