

# Chemlok® Adhesives Safe Handling Guide

## Introduction

LORD Chemlok® adhesives have been used in the rubber industry for over 50 years. By adhering to established safe handling techniques, these products have been utilized without posing a hazard to people or property. This document serves as a guide to make customers aware of potential hazards, and suggests procedures to eliminate them in the workplace. Refer to the product Safety Data Sheet (SDS) and label before using any Chemlok product.

## Types of Products

There are three basic types of Chemlok adhesives:

- Solvent-borne Adhesives
- Aqueous Adhesives
- 100% Solids Adhesives

Potential hazards and suggested safe handling procedures for each type of Chemlok adhesive are addressed in this document.

### **Solvent-borne Adhesives**

Many of these products are flammable due to the type of solvents that they contain. Solvents used in these products include aromatics, acetates, alcohols, ketones, chlorinated solvents, or a combination of these types. Use safety procedures appropriate for flammable liquids when handling products containing any of these solvents. Typically, chlorinated solvents are not flammable; however, chlorinated solvents, when used in conjunction with flammable solvents, can result in a flammable mixture.

### **Aqueous Adhesives**

Aqueous adhesive systems are formulated primarily in water. However, some may contain small amounts of water miscible organic solvents such as glycol ethers based on ethylene or propylene glycol. Although most aqueous Chemlok adhesives are not flammable in the wet state, some specialty elastomer adhesives contain

alcohol, which may cause the adhesive system to be flammable. Refer to the product SDS to identify the flash point and flammability of individual aqueous adhesives.

### **100% Solids Adhesives**

Most 100% solids adhesives are either epoxy or polyurethane based resins. Fire or explosion hazards are minimal with these products; however, they are combustible and will burn.

## Safe Handling Procedures

### **Flammability**

- Use Chemlok products in well-ventilated areas.
- Spray adhesives only in an OSHA-approved spray booth.
- For flammable adhesives, use of explosion-proof electrical outlets, wiring, motors and exhaust fans is required by OSHA, the National Electric Code (NEC), and insurance underwriters.
- Flammable solvent-based adhesives should be stored in metal containers. Metal containers are more conductive and reduce the possibility of static and heat buildup.
- Ground and bond metal containers when transferring flammable liquid solvents and adhesives.
- Isolate containers from heat, electrical equipment, sparks, friction, open flame and other sources of ignition.
- Keep containers tightly closed when not in use.
- Clean up spills immediately according to instructions in Section 6 (Accidental Release) of the product SDS.
- In the event of a fire with a Chemlok product, use fire-fighting measures outlined in Section 5 (Fire Fighting Measures) of the product SDS.
- Ensure that a qualified engineer or technician supervises the design, construction, and operation of any carbon adsorption systems that are used in venting Chemlok products. Some types of Chemlok products contain chemicals, such as ketones, that may react with the carbon surface causing severe exotherms or temperature excursions.

## **Spill Cleanup**

- Keep non-essential personnel a safe distance away from the spill area.
- For flammable Chemlok products, remove all sources of ignition (flame, heat, electrical, static or frictional sparks).
- Avoid breathing vapors – use appropriate respiratory protection, if necessary.
- Avoid contact – use appropriate personal protective equipment.
- Contain and remove the spilled product with inert absorbent material (and non-sparking tools for flammable Chemlok products).
- Notify appropriate authorities, in accordance with applicable regulatory requirements, as necessary.
- Before attempting cleanup, refer to Section 6 (Accidental Release) of the product SDS.

## **Personal Health and Safety**

Because of the variation of hazardous ingredients in Chemlok products and the resulting differing potential effects of personal exposure to workers, it is essential to refer to the SDS and label for the specific product to ensure that it is stored, handled and used safely and that appropriate controls and personal protective equipment are utilized.

- Use in well ventilated area. Avoid breathing vapors and spray mist.
- Avoid skin and eye contact.
- Wear approved respirators when occupational limits are exceeded.
- Use safety eyewear including safety glasses with side shields and chemical goggles where splashing may occur.
- Wear appropriate gloves.
- Use disposable or impervious clothing. Remove and wash when contaminated.
- Wash thoroughly before eating, smoking, or using toilet facility.
- If first aid measures are needed for ingestion, inhalation, eye contact or skin contact, refer to Section 4 (First Aid Measures) of the product SDS.

## **Application/Spray Equipment**

- Ensure extinguishers are near application equipment and readily accessible.
- Fixtures with excessive film buildup or film buildup that falls off a part or gets into the oven can increase the risk of smoldering/fires.
- Automated application equipment (chain-on-edge) and associated ovens should have safety interlocks that shut down the oven or stop the line in the event of a fire.
- Electric, steam coil or natural gas enclosed box-type ovens are preferred. IR ovens have an increased potential for causing Chemlok products to smolder or ignite.
- Use flame retardant, heavyweight paper to line all floor areas in immediate application area to prevent buildup on floor. Dispose of dirty paper under proper regulatory guidelines.
- Use disposable/peelable spray booth coating to protect all spray booth walls, etc. Sprinkler heads in the spray application areas should be covered according to local fire code to protect from excess spray debris building up on them. This covering will prevent excessive buildup, allowing proper functioning during a fire.
- Warning: Due to the combustible nature of the dried film of Chemlok products and the potential for smoldering or fire, the accumulation and buildup of the dried film on spray booth walls and floors, spindles, fixtures and other surfaces should be avoided, and any buildup should be removed. Refer to Cleaning section for more information. In the event of smoldering or a fire involving the dried product, Cold Fire® fire suppressing agent\* is preferred as the extinguishing medium. If Cold Fire is not available, use water spray as the extinguishing medium. Take efforts to ensure that these agents reach the base of the smoldering or fire. LORD Corporation will not be responsible for personal injuries, property damage or any other damages arising from the accumulation (buildup), cleaning/removal, or any related smoldering or fire resulting from the use of Chemlok products.

*\*Note: LORD Corporation has determined Cold Fire fire suppressing agent to be effective in extinguishing fires involving dried Chemlok adhesives. LORD does not recommend any particular equipment or system for use in delivering or applying Cold Fire products. Customer is responsible for determining that Cold Fire products and any delivery equipment or system is appropriate and effective for customer's specific needs.*

## **Waste Disposal Procedures**

Guidelines established here are for waste streams generated from the use of Chemlok products. Disposal should be done in accordance with national and local environmental waste control regulations. The waste stream should be evaluated for hazardous characteristics. If waste is determined to be hazardous, properly dispose per local requirements.

- Waste containing residual solvent should be treated as a flammable hazard.
- Waste streams comprised of dried Chemlok adhesive residue should be treated as ignitable solids per the Globally Harmonized System of classification.
- Liquid or solid waste known to contain toxic contaminants such as persistent, bioaccumulative toxins should be treated a hazardous.

## **Housekeeping**

- Prevention of dry film buildup is key for safe handling. Daily or weekly inspection of application equipment, including oven tunnels and associated equipment, is recommended. Dry Chemlok adhesive residue becomes more flammable as the thickness of the film increases.
- Remove dried adhesive around any mixing shafts where heat could build up and cause smoldering/fire.
- Avoid excessive buildup of dried Chemlok products on floors and other surfaces.

## **Cleaning**

It is always recommended to avoid the buildup of dried Chemlok adhesive films. However, if a film buildup has to be cleaned, the following precautions should be followed.

- Non-sparking brass brush or plastic scrapers can be used for cleaning. Caution should be exercised as brush/scrapper can also generate sufficient heat from friction to initiate smoldering/fire.
- There are a variety of debris removal methods. Consult with your LORD representative to determine suitable methods for debris removal from application equipment.
- Make sure that some sort of water reservoir is available to continually wet down the surfaces being cleaned. This keeps temperatures down and reduces the effect of frictional heat buildup during cleaning.
- For larger debris clean-ups, explosion-proof vacuums are suggested.

**Remember – There are no short cuts to Safety!**

## **Cautionary Information**

Before using this or any LORD product, refer to the Safety Data Sheet (SDS) and label for safe use and handling instructions.

*For industrial/commercial use only.* Must be applied by trained personnel only. Not to be used in household applications. Not for consumer use.

# LORD TECHNICAL DATA

Values stated in this technical data sheet represent typical values as not all tests are run on each lot of material produced. For formalized product specifications for specific product end uses, contact the Customer Support Center.

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