celsior, paper products, or sawdust, sufficient heat can be generated to char or ignite the material if the concentration is above the pyrophoric limit Solutions of butyllithium should never be exposed to the atmosphere but rather handled in enclosed systems or under inert dry atmosphere

Emergency showers and eye baths should be placed in convenient locations Every employee should be carefully instructed, and understand that direct contact with the skin requires immediate flushing with large quantities of water to the affected area

Butyraldehydes have a relatively low degree of toxicity Although there is a lack of detailed information on the subject, no cases are known of either acute or chronic intoxication due to exposures to butyraldehydes Butyraldehydes produce irritation and burns of the skin and eyes following contact of short duration Butyraldehydes have good warning properties due to a characteristic pungent aldehyde odor

Butyraldehyde is a highly volatile flammable liquid readily forming explosive mixtures with air It has a low flash point and low ignition temperature and is readily ignited by static sparks of relatively low energy It is a reactive chemical and the heat released by an uncontrolled reaction will soon cause boiling and either pressure increase or release of large volumes of flammable vapor Butyraldehydes undergo rapid oxidation, any spills that are wiped up with rags can lead to fires in the rags

Animal experiments have shown that large doses of butyraldehydes produce both depression of the central nervous system and anesthesia so that the symptoms of acute intoxication in man (such as drowsiness, incoordination, and headache) might be anticipated The animal experiments also suggest that these systemic symptoms may develop from exposures to concentrations below those causing uncomfortable irritation of the eyes, nose, and throat

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Cadmium metal is easily flammable in the form of dust or fine powder The finely powdered oxide produced in cadmium fires is acutely poisonous, and several cases of serious poisoning incurred in fighting fires involving cadmium metal have been recorded No attempt should be made to approach such a fire without a supplied air respirator, universal gas mask with smoke filter, or metal fume respirator

One of the commonest sources of acute industrial poisoning is the heating or welding of cadmium plated metals This job should be done only under efficient local exhaust or by workmen equipped with supplied air respirators

Industrial poisoning by swallowing of soluble cadmium compounds is not common, but a number of nonindustrial cases from the preparation of acid foods in cadmium plated utensils have occurred

There is some disagreement as to the possibility of chronic cadmium poisoning One examination was made of 38 men working in the production of alkali storage batteries and exposed to atmospheres ranging from three to 900 mg of cadmium and almost equal amounts of nickel per cu m These men complained of fatigue, nervousness and irritability, thirst, cough and shortness of breath In about half of the workmen with long periods of employment, the sense of smell was impaired Of the 19 men with more than eight years of work in the battery plant, 15 showed protein in the urine, 12 suffered more or less from loss of the sense of smell, and 14 showed impaired kidney function Fifteen of 17 men examined with the spirometer showed impaired lung function, and all of them complained from time to time of shortness of breath In four cases the changes in the lungs were noticeable on X-ray examination, and six other cases showed signs of inactive tuberculosis One case had active tuberculosis

Other examinations were made on 20 workmen from a cadmium smelter at repeated intervals over a period of 3 months These men had exposures varying from 6 months to 22 years, and the atmospheric concentrations in the plant ran from 0 04 to 31 3 mg of cadmium per cu m of air Exposures to the highest concentration, however, lasted only two to three hours per day, and the men were rotated so that total exposure to the highest concentrations was comparatively limited The most characteristic finding was a yellow ring on the teeth of the men with long ex-