

Safe Work Instruction

Safe handling and storage of solvents

Issue date: 14/08/09

Review date: 30/07/12

Document no. SMS-06-SW-0193	Job title/description Safe handling of solvents		
Review date 30/07/12	References OHS Regulation 2001 – Chapter 6 WorkCover Code of Practice for Storage and handling of dangerous goods 2005 WorkCover Code of Practice for Control of workplace hazardous substances 1996 NOHSC Industrial organic solvents 1990		
Responsible supervisor <i>Insert name in BLOCK letters</i>	PPE and precautions See below	Competencies or qualifications	Licences or permits required
Tools and equipment required			
<p>THIS DOCUMENT PROVIDES INFORMATION AND ESTABLISHES GENERAL PROVISIONS FOR THE SAFE HANDLING AND STORAGE OF SOLVENT-BASED PRODUCTS. IT IS NOT INTENDED TO REPLACE THE REVIEW OF MSDS, RISK ASSESSMENT AND SWMS OR SWIs FOR SPECIFIC PRODUCTS</p>			
General	<ul style="list-style-type: none"> • Worker exposure to organic solvents must be kept as low as practicable and must be below exposure standards detailed in the MSDS and ASCC publication "Adopted National Exposure Standards for Atmospheric Contaminants in the Occupational Environment" NOHSC: 1003. • This is achieved by: <ul style="list-style-type: none"> - risk assessment of all solvents used and stored in RailCorp (using Dangerous Goods and Hazardous Substances Hazard Identification and assessment form) - elimination or implementation and monitoring of appropriate control measures - monitoring exposure levels (where applicable). • The risk assessment process for solvent use must consider: <ul style="list-style-type: none"> - proposed use and method of application - the environment where the substance will be used - physical properties of the product (as per MSDS) - possible additive and synergistic effects of exposure to multiple solvents. 		
Background information	<ul style="list-style-type: none"> • Solvents are often used to dissolve or dilute other substances and materials for cleaning purposes and are often used in products where they act as carriers for surface coatings such as paints, varnishes, adhesives and pesticides. • Industrial solvents are often mixtures of several individual substances and can be found under a variety of trade names. Typically these substances are both hazardous substances (due to their effect on the body) and dangerous goods (due to their flammability). • The harmful effects of solvents occur after: <ul style="list-style-type: none"> - inhalation of vapour – the most significant route of exposure. Paints, paint strippers and glues give off harmful vapours as they dry or cure. Deliberate inhalation can be fatal - eye contact with liquid or vapour - can cause irritation or inflammation. - ingestion – can occur through contaminated food, drink and smoking cigarettes (as a result of poor personal hygiene) - skin contact with liquid or vapour – can be absorbed through the skin. Prolonged skin contact with liquid solvents may cause serious damage to the skin itself (ie dermatitis) or drying and defatting. 		

Safe handling and storage of solvents

Controlling exposure	<ul style="list-style-type: none"> When purchasing solvents consider the availability and performance of alternatives to solvent-based products, and where practicable, procure solvent-free products. Solvent-based products must only be used in well ventilated areas. This may require local exhaust (mechanical) ventilation to be used, particularly in confined spaces and restricted space locations. Where local exhaust ventilation is used an appropriate cleaning filter must be fitted to prevent atmospheric pollution. Where practicable, use a brush (or similar) or low pressure spray to apply solvent based-product to minimize vapour. Solvents must be stored in properly labelled and suitable containers. Consider using dispensers to minimise evaporation and spillage. Lids must be secured on solvent containers at all times when the substance is not in use. Solvent waste (including rags and other material contaminated with solvents) must be disposed of in sealed containers unless otherwise indicated in the MSDS for the product. Solvents/thinners must not be used to remove paint or grease from the skin – proper cleaning materials, eg soap or other cleansers must be provided and used. Workers using solvents should be encouraged to use good personal hygiene practices, ie washing hands before eating, drinking, smoking and going to the toilet, and eating, drinking and smoking should take place away from the work area. Smoking is not permitted in areas where solvents are being used. This represents a potential fire hazard and further complication of health effects as solvents are passed through a cigarette can break down into even more harmful substances.
Training	<ul style="list-style-type: none"> All persons required to use solvents must be trained and competent in the specific work practices to be followed.
First aid	<ul style="list-style-type: none"> First aid equipment must be readily available in all areas where solvents are handled and stored. Any worker who has been exposed to solvents and feels that their health has been affected must be directed to seek medical advice.
PPE	<p>Where exposure cannot be prevented through other means, personnel must be provided with appropriate personal protective clothing and equipment. In accordance with the relevant MSDS and risk assessment, this may include:</p> <ul style="list-style-type: none"> solvent resistant gloves conforming to AS2161 a suitable air purifying respirator or supplied air respirator clean cotton overalls solvent-resistant boots safety glasses, goggles or face shields conforming to AS1336, and an apron.
Storage	<p>Solvents must be stored in proper flammable liquid storerooms or cabinets where possible.</p> <p>Solvents must be stored in a cool, well ventilated place, away from:</p> <ul style="list-style-type: none"> potential ignition sources food, drink and therapeutic substances incompatible substances which require separation or segregation. <p>Areas used to store solvents must be secured against unauthorised access and fitted with appropriate signage and fire fighting equipment.</p> <p>The quantity of solvents stored is to be regularly monitored by Line Manager and kept to a minimum (below minor storage quantities):</p> <ul style="list-style-type: none"> less than 250L of Class 3 (PGII) product if stored outdoors at commercial premises less than 2500L of Class 3 (PGII) on construction sites.
Additional controls	