TIP sheet

Hazardous substances and dangerous goods

T015 – SEPTEMBER 2007

Minimum requirements

Managers and Supervisors must implement measures to control and/or minimise the health and safety risks associated with the handling and storage of Hazardous Substances and Dangerous Goods (HSDG) in the workplace.

HSDG are regulated under the OHS Regulation 2001 while explosives and security sensitive dangerous substances are regulated by the Explosives Regulation 2005.

All RTA worksites shall:

- Identify and register all workplace HSDG's (tanks and vessels) in the HSDG Register.
- Undertake a risk assessment for the use of each HSDG and record the outcomes.
- Utilise the least hazardous/dangerous HSDG that is suitable for the task.
- Transport DG's in compliance with Australian Code for the Transport of Dangerous Goods by Road and Rail.
- All HSDG's must be adequately labelled and where practical, stored in original containers.
- Store all DG in accordance with the OHS Amendment (Dangerous Goods) Regulation 2005 observing all storage, separation, bunding, signage, placarding and ventilation requirements.
- Ensure Material Safety Data Sheets (MSDS) are obtained for all HSDG's in use and made available to all employees who use them.
- Implement measures to control exposure to HSDG.
- Develop written Safe Work Method Statements (SWMS) for all tasks involving HSDG of significant risk.
- Develop emergency procedures to prevent/contain fire or explosion and control risks due to escape or spillage of HSDG (inclulding Spill Kits).
- Ensure that all staff and contractors who may interact with HSDG, are trained in the nature of the hazards involved, the means adopted to control exposure and emergency procedures in place.
- Provide Health Surveillance is for all staff who have been exposed to HS if there is a risk to the health of an employee as a result of that exposure.

Risk assessment

A risk assessment must be completed by a competent person prior to HSDG use and should include at least the:

- Nature of the hazard to health and safety.
- Degree of exposure to the hazardous substances.
- Degree of risk to health and safety.
- Measures required to control the exposure to HS and ensure safe storage of the DG.
- Requirement or otherwise for health surveillance.
- Induction or training required for staff.

Risk control

Risk Control means elimination or reduction of risk by:

- Cessation of use of the hazardous substance.
- Substitution by less hazardous substance.
- Isolation, in order to control exposure.
- Engineering controls, including exhaust ventilation, subject to the need to undertake environmental impact assessment in consultation with the relevant Environment Manager (see Appendices A and C of the RTA Environmental Impact Guidelines).
- Adoption of safe systems of work that minimise exposure to risk.
- Issue of Personal Protective Equipment to affected staff.
- Implementation of Administrative Controls.

Using more than one of these controls in combination is usually necessary.

Competency based training

Training is to be provided to any staff that may be exposed to hazardous substances and should include:

- Identification and assessment of OHS risks.
- Information on the nature and degree of the hazard and the means of control of exposure.
- The layout and condition of the workplace environment.
- Capability, skill and experience required to handle or use the hazardous substance.
- The need for control measures to ensure safe use of the hazardous substance.
- The need for, proper use and maintenance of Personal Protective Equipment and identification of any defects or malfunctions.

All TIP sheets are available on the RTA internet or contact your OHS facilitator for assistance.

HSDG register

A hazardous substance register is required to keep the following information:

- A list of all hazardous substances used in the workplace.
- The relevant MSDS is provided by the manufacturer or supplier.
- Outcomes of HSDG risk assessment.

The register is to be made accessible and maintained in each RTA workplace and reviewed whenever:

- A new hazardous substance is introduced.
- An MSDS is more than 5 years old.
- There is more than 20 percent change in the maximum amount of the substance held at a location.

Airborne monitoring

If the exposure cannot be estimated with confidence, then air monitoring enables comparison to the exposure standards. Specialist health and safety practitioners such as occupational hygienists usually undertake this work. Speak with your local OHS Facilitator to identify the most appropriate service provider.

Health Surveillance

If the MSDS indicates significant health effects, the need to provide regular medical checks must be assessed. Refer to RTA OHS Policy Health Surveillance for advice regarding health monitoring requirements and medical service practitioners.

A well developed Risk Assessment undertaken in consultation with the appropriate information and resources may identify the need for ongoing or periodic atmospheric monitoring of the workplace.

Health surveillance for some substances is mandatory and includes: isocyanates; silica; asbestos; arsenic and creosote; organophosphate pesticides, and Lead.

Placarding & Manifesting

Where the quantity of Dangerous Goods exceed the conditions documented in the following table, then placarding and/or manifesting shall be implemented compliant with the NSW OHS Amendment (Dangerous Goods) Act 2003 and NSW OHS Amendment (Dangerous Goods) Regulation 2005.

Dangerous good	PG	Qty needed for placarding	Qty needed for manifest
Class 2.1	NA	500L	5000L
Class 2.1 Sub Risk 5.1	NA	2000L	10000L
Class 2.3	NA	50L	500L
Aerosols	NA	5000L	10000L
Class 3, 4.1, 4.2, 4.3, 5.1, 5.2, 6.1, 8	I	50kg or L	500kg or L
	II	250kg or L	2500kg or L
	III*	1000kg or L	10000kg or L
Class 9	II	1000kg or L	10000kg or L
	III*	5000kg or L	10000kg or L
Mixed Classes	NA	2000kg or L	10000kg or L
Combustible liquids stored with DG less than above qty	NA	1000kg or L	10000kg or L
Combustible liquids in bulk store separate from other DG	NA	10000kg or L	100000kg or L
Combustible liquids in packages stored separate from other DG	NA	50000kg or L	100000kg or L

* Includes mixed Packing Groups within the Class

Personal Protective Equipment

PPE shall be available and be:

- Used as per original substance manufacturer directions & MSDS.
- Inspected before each use for wear, damage and 'use-by' dates.
- Consistent with Risk Assessments, and SWMS requirements.

Disposal of HSDG's

Refer to the Department of Commerce for its list of approved waste disposal providers. When selecting a provider for the removal of an unknown substance, ensure that they have the capacity to remove hazardous substances.

In the event of an emergency

An emergency response plan shall be prepared in consultation with the workers & emergency service agencies where appropriate & regular emergency response drills shall be conducted. Information to address an emergency plan can be found in the HSDG MSDS.

Spills & leaks shall be contained & cleaned up where safe to do so.

Each HS/DG is defined by a HAZCHEM code to assist in dealing with the substance in an emergency. Below is a table to assist in interpreting the codes. HAZCHEM interpretation:

Number			
1	Water jets		
2	Water fog		
3	Foam		
4	Dry agent		
First letter			
P	V+	Full Protective Clothing*	Dilute
R		Full Protective Clothing*	Dilute
S	V+	Breathing Apparatus	Dilute
S	V+	Breathing Apparatus for Fire Only	Dilute
T		Breathing Apparatus	Dilute
T		Breathing Apparatus for Fire Only	Dilute
W	V+	Full Protective Clothing*	Dilute
X		Full Protective Clothing*	Dilute
Y	V+	Breathing Apparatus	Contain
Y	V+	Breathing Apparatus for Fire Only	Contain
Z		Breathing Apparatus	Contain
Z		Breathing Apparatus for Fire Only	Contain
Second letter			
E	Consider evaluation		

* Includes Breathing Apparatus.

+ V = Danger of violent reaction or explosion

References

NSW OHS Act 2000 & OHS Regulation 2001 Ch 2, 3, 6, 8

NSW OHS Amendment (Dangerous Goods) Act 2003; NSW OHS Amendment (Dangerous Goods) Regulation 2005.

WorkCover COP for the Control of Workplace Hazardous Substances (2006).

WorkCover COP Storage and Handling of Dangerous Goods (2005).

NOHSC 2012 (1994) National COP for labelling of workplace substances.

NOHSC 2017 (2001) National COP for storage & handling of workplace dangerous goods.

RTA OHS Policy 2.13 Hazards Substances

RTA Managing Hazardous Substances in the Workplace

RTA OHS Policy Health Surveillance

All TIP sheets are available on the RTA internet or contact your OHS facilitator for assistance.