

B4 - Hazardous substances

1 Scope

This standard is applicable to all Rio Tinto business units and managed operations, including new acquisitions, administration/corporate offices and research facilities located off site; during exploration, through all development phases and construction, operation to closure and, where applicable, for post closure management. It applies to dangerous goods and hazardous substances, both process and non-process. It covers hazard identification and evaluation, control programme design and evaluation, to ensure that employees, contractors and third parties will not suffer adverse health or safety effects from hazardous substances that are transferred, used or generated by the business, and to ensure the minimisation of risks and environmental impacts due to spill or other releases of hazardous substances. Local definitions of dangerous goods and hazardous substances in regulations should be adhered to by businesses.

This standard is an extension of Elements 7.1 through 7.4 of the HSEQ management system.

2 Programme design

- 2.1 A hazardous materials register or inventory system must be available and be used to control the purchase and introduction of new materials to operations, including those brought in by contractors. The register must be updated regularly.
- 2.2 The properties of materials brought to site, site products, intermediates, by-products and wastes must be adequately understood and documented with regard to their ability to impact on health, safety and environment. Material Safety Data Sheets (MSDS) must be obtained where possible and when required by law prior to using hazardous materials at site.
- 2.3 MSDS, or equivalent hazard communication document, for products and any process or waste materials sent off site must be sent to customers. These documents must be maintained and identified on the site register.
- 2.4 MSDS must be used to:
 - a) provide adequate information regarding health, safety and environmental effects, precautions and safe handling practices to all on site who transport, handle or use hazardous materials/substances;
 - b) conduct a risk assessment to determine the need for workplace monitoring, medical surveillance and controls;
 - c) prepare workplace labels as necessary; and

- d) provide emergency response and first aid information.

- 2.5 A coordinator must be assigned the accountability for the hazardous substances management programme, which will include maintenance of the hazardous materials register and MSDS system.

- 2.6 Safe working procedures and training in the safe use, transport, storage and disposal of hazardous substances (including explosive dusts), as well as the use of appropriate storage facilities and personal protective equipment, must be provided.

- 2.7 Deleted

- 2.8 MSDS for site products and process or waste materials must comply with local regulatory requirements and with requirements of the country or location to which the product is shipped. Mandatory use of GHS (Globally Harmonised System) compliant MSDS will be required for those countries that have adopted GHS. MSDS must be revised, as necessary, at least every 5 years.

- 2.9 Material Safety Data Sheets (MSDS), or a computer database containing MSDS, must be readily available to employees, contractors and other affected parties (eg local community, emergency services), and be in the language(s) commonly used at the operation.

3 Material Safety Data Sheets - Deleted

3.1 Deleted and moved to clause 2.8.

3.2 Deleted and moved to clause 2.9.

4 Controls

4.1 Deleted

4.2 There must be written procedures for the use, storage and disposal of identified high priority hazardous substances (those with a risk classification of Critical). These must be audited every 12 months.

4.3 Storage facilities must be secure and protected from damage. They must also be designed for easy access for fire fighting. Where applicable, the storage facility must protect chemical containers from physical damage due to temperature extremes, moisture, corrosive mists or vapours, and vehicles.

4.4 Hazardous substances must be adequately stored and segregated based on:

a) quantity of materials stored;

b) physical state of the chemicals (solid, liquid or gas);

c) degree of incompatibility; and

d) known behaviour of the materials.

- 4.5 All containers must be adequately and clearly labelled to indicate identity, precautionary requirements and date for expiry, where relevant. Pipes or other distribution systems used for hazardous substances must be clearly identified. Directional flow must be indicated where practical.
- 4.6 Prior to disposal, empty containers/equipment must be properly decontaminated, where applicable.
- 4.7 There must be a programme to assess safer alternatives to current hazardous chemicals/ substances (based on risk assessment for health, safety or environmental hazards), and to limit worker access to hazardous substances. This programme must also consider product and process re-formulation/re-design activities where technically feasible.
- 4.8 Appropriate PPE must be selected with regard to the potential hazards, permeability, penetration, resistance to damage and compatibility with the work tasks.
- 4.9 Emergency showers and eye-wash stations must be available where required by law, or where their need is indicated by risk assessment, and must be appropriately located, maintained regularly and signposted. Workers must be trained as to their location and use.
- 4.10 Supply chain optimisation practices must be used to minimise the inventory of hazardous substances to necessary quantities for justifiable use.

5 Asbestos and non-asbestos fibrous silicates - moved

- 5.1 Deleted and moved to standard-clause B1-6.1.
- 5.2 Deleted and moved to standard-clause B1-6.2.
- 5.3 Deleted and moved to standard-clause B1-6.3.
- 5.4 Deleted and moved to standard-clause B1-6.4.
- 5.5 Deleted and moved to standard-clause B1-6.5.
- 5.6 Deleted and moved to standard-clause B1-6.6.

Revision history

Version no.	Effective date	Prepared by	Authorised by	
1	Feb 2003	Richard Gaunt & Ian Firth	ExCo	
Version no.	Revision date	Revised by	Authorised by	Reason for change
4	December 2008	Ian Firth; Adrian van Tonder	Manoel Arruda	Incorporation of suggested changes from operations and alignment with HSEQ management system.