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Product Stewardship

CIA | Chemical
Industries
Association

The Responsible Care of products
through all stages of their life cycle

Working for chemical and
pharmaceutical businesses



Responsible Care :
continuously improving health, safety
and environmental performance

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INTRODUCTION

Product Stewardship integrates all aspects of a product's health, safety and environmental management through its lifecycle, taking into account existing and emerging regulatory requirement, societal pressures and best business practices. An integral part of Responsible Care, product stewardship provides a valuable framework to improve on chemicals management.

This guideline has been designed to accommodate the fact that product management tends to be organised along functional lines: manufacturing, distribution, research and development (R&D), sales, marketing and in many cases supported by a regulatory affairs team, providing the details of responsibilities for each role in a company to contribute to a sound product stewardship programme.

1 Responsible Care and Product Stewardship

In March 1989, the Chemical Industries Association (CIA) launched its Responsible Care initiative following the successful development of the concept by the Canadian Chemical Producers' Association (CCPA) and its subsequent adoption by the US Chemical Manufacturers Association (CMA). The concept is spreading worldwide – for example throughout Europe and to Japan, Australia and Brazil.

In February 2006, the International Council of Chemical Associations (ICCA) launched the Global Product Strategy (GPS), an initiative designed to improve chemical management practices around the world. Part of the GPS programme is about enhancing product stewardship programmes across all 54 trade associations' signatories to Responsible Care including CIA.

In the UK, chief executives of all CIA member companies have signed a commitment to the Responsible Care Guiding Principles for demonstrating performance improvements in, and achieving an acceptably high level of protection for, the health and safety of employees, customers, the public and the environment.



Responsible Care®
continuously improving health, safety
and environmental performance



2 Benefits of Product Stewardship

The Chemical Industry operates today in a world where people are increasingly aware of the environmental and human health impact of the products we make and use. The industry and its downstream users constantly face regulatory and societal pressures to continuously drive improvements to ensure safe and functional products are delivered to consumers. Product Stewardship provides a valuable framework to improve chemical management as it integrates all aspects of a product's health, safety and environmental management taking into account regulatory requirement, societal pressures and existing best business practices. When considering product management, it is vital to think of what happens to the product throughout its life cycle, from the moment of invention until it has ultimately been used and disposed of, or potentially recycled, so that no aspect of management is neglected. It focuses on what happens to the product irrespective of ownership or organisational responsibility. Hence, Product Stewardship is seen as a vital component of Responsible Care.

An effective Product Stewardship process maximises the care a producer can exercise towards all his customers in the total supply chain (including customer's customers and others who may be affected) through to ultimate use and disposal or possible re-entry into the lifecycle through recycling. As such, it adds value to the product by simultaneously increasing its attractiveness; reducing the risk of harm both to human health and to the environment; reducing the risk of marketing a defective product and, in consequence, reducing potential liabilities. Additional investment early in the product's life cycle to prevent, minimise or protect against HS&E problems in the long-term will reduce the need for greater expenditure to correct or mitigate such problems later.

"Product stewardship and effective application of product life cycle management approaches play an importance role in Johnson Matthey's overall company sustainability strategy and commitment to Responsible Care. Through continued efforts to raise standards in product stewardship across the supply chain, including communication of relevant safety information, industry will continue to demonstrate, and further enhance confidence in, its safe management of chemicals throughout their life cycle."

Nissanka Rajapakse, Group Product Stewardship Manager, Johnson Matthey



"Product Stewardship is important for all companies. As an SME this is a major challenge for us but one we must face to ensure we continue to raise our standards, take responsibility for our products and guarantee a future place in our chosen markets."

Harry Swan, Managing Director, Thomas Swan





Value to business

The purpose of a company's Product Stewardship is to reduce product risks. This is achieved by continuous improvement in all aspects of HS&E performance of each product throughout its life cycle, resulting in a continuous minimisation of risks to people and the environment. The benefits for companies include an increase in product value ensuring regulatory compliance, a reduction in product and business risks and a reduced probability in marketing defective products and related potential liabilities.

Financial benefits

With manufacturing costs on the rise, embracing such a strategy provide companies with some control over increasing insurance premiums. Without a doubt, it is in the insurance company's interests to determine the financial risk they are taking. Maintaining product stewardship practices demonstrates to insurance companies the organisations effort to ensure its products are safely handled and only supplied for suitable applications, reducing its potential liabilities. Other financial benefits offered by PS can include reduced waste management costs, reduced audit costs as a result of less prominent follow-up actions being recommended and better investment opportunities with many banks making commitments to the environment.

Best in class

There are also a number of benefits for a customer purchasing from a company with a good product management record. Suppliers who are able to offer information and support on SHE issues are not only adding value to their product package but are reducing any associated risks throughout the product's life cycle, avoiding consequential costs and reputation damage. Many customers are now keen to be associated with prestigious suppliers as part of their own reputation agenda. Inevitably, a Product Stewardship programme that is well perceived by the customer will enable the sales force to improve their contacts within industry opening doors to new potential commercial opportunities. Furthermore, customers are increasingly ranking their suppliers based on supplier systems such as ISO 9000, ISO 14,000 and Product Stewardship. Good Product Stewardship made known to and appreciated by a customer is just another reason that differentiates a supplier from the 'rest' – providing that much needed competitive advantage for businesses and encouraging customer loyalty.

"As part of our commitment to product stewardship, we implemented a pollution management programme in order to minimise the impact we have on the environment. The launch of VECAP (Voluntary Emissions Control Action Programme) brought us much closer to our customers, particularly in terms of product handling and waste management practices and we gladly recommend setting up similar voluntary programmes to chemical companies."

K Kannah, Manager, European Advocacy, Chemtura





3 CIA Principles of Product Stewardship

- 1 Demonstrate that the management of product HS&E issues ranks amongst the highest corporate priorities and maintain commitment to continuous improvement.
- 2 Design, develop or modify products both to meet customer needs and minimise HS&E impacts throughout the value chain, taking into account resource use and waste minimisation throughout a product lifecycle
- 3 Ensure all product changes likely to affect the original HS&E assessment of the product are reviewed.
- 4 Provide information to and work with customers to foster safe storage, use, handling and disposal of products. Seek feedback on customer use and misuse of products.
- 5 Ensure customer facing workforce has clear understanding and communicates information of product safety, related legislation as well as product benefit.
- 6 Ensure raw materials are responsibly sourced from suppliers who have embraced good HS&E standards and where appropriate, include these considerations in purchasing policies.
- 7 Provide education and training for employees, based on their job function, on the safe storage, handling, use and disposal of products.
- 8 Select and work with contract manufacturers and contract distributors to meet appropriate HS&E standards.
- 9 Be open and communicative with employees, the supply chain and external stakeholders, anticipating and responding to their concerns about the potential hazards and impacts of the products.
- 10 Businesses with international interests should apply these principles worldwide and ethically comply with all HS&E legislation, codes of practice and guidelines; they are also encouraged to participate proactively in the development of local laws and regulations in all countries in which the company has significant resources.



4 Key Responsibilities

The first principle of Product Stewardship requires the senior management of a company to:

‘Demonstrate that the management of product HS&E issues ranks amongst the highest corporate priorities and maintain commitment to continuous improvement.’

Without this demonstrable commitment, which is in any case implicit in the Guiding Principles of Responsible Care, there can neither be success in achieving excellence against the other Principles of Product Stewardship, nor credibility for Product Stewardship in the eyes of employees, customers and the public.

This chapter deals with functional responsibilities for implementing Product Stewardship throughout the lifecycle of a product. The following management functions are considered:

- **Senior management**
- **Research & development**
- **Purchasing**
- **Manufacturing**
- **Customer services, marketing and sales**
- **Distribution of products**
- **Regulatory affairs**
- **Waste disposal and recovery**



Key Responsibilities for Senior Management

This section deals with the overall corporate and line management responsibilities for integrating all aspects of Product Stewardship.

- Establish and communicate a written Product Stewardship vision and actively lead its implementation through meaningful objectives/aims including the provision of adequate resources.
- Define the line management responsibility and instigate management systems for the effective implementation of Product Stewardship. Allocate individual responsibility for all aspects of Product Stewardship.
- Establish goals for the continuous improvement of performance in relation to Product Stewardship and measure actual performance against these goals.
- Product stewardship should be an integral part of the culture of the workplace and included as an element of performance appraisal of both management and employees.
- Ensure that the necessary communication, education and training procedures required to maintain the concept are in place for all functions.
- Ensure conformance with all the Principles of Product Stewardship (see page 4) and ensure that systems are maintained, regularly reviewed and audited in a manner consistent with these guidelines. Seek third party certification to an independent standard, e.g. the ISO 9000 series or other appropriate standard.
- Develop and maintain the business public relations response on product HS&E issues and, where appropriate, participate positively in the development of public opinion, the influencing of relevant legislation and the development of the industry's position.
- Establish an overall measurement of progress against the guidance given in this document. The focus should be on continuous improvement from year to year, rather than on absolute measures.



Key Responsibilities in Product Research and Development

Product Research and Development is defined as technical work of an investigative nature

which occurs at all stages of progression of a new or modified product and its uses. It extends from initial management approval of scientific research to market introduction.

- Develop and support only those developments which do not pose unacceptable risks in the handling, use and disposal of products throughout their foreseen life cycle. Where possible, develop alternative lower risk products for the specified uses.
- Ensure that no product is commercialised without adequate testing and full compliance with all relevant laws and regulations.
- Characterise the risks of all potential products based on the inherent hazards, potential risks and exposures.
- Specify and conduct tests according to acceptable standards at each stage of product development so that potential health and safety hazards and environmental effects (including energy and natural resource usage) can be identified and evaluated. Treat proposed changes to existing products similarly.
- Identify, obtain and continuously update information on the handling, use, storage and disposal of products – including intended components and impurities – to deal with potential problems before they become human or environmental risks. Communicate the data to those people across the organisation that need it e.g. marketing and sales personnel, production and distribution staff, so that employees, transporters and customers can be advised effectively.
- Develop products and packaging such that surpluses are either recyclable or can be ultimately disposed of in a manner presenting the best practical environmental option.
- Endeavour to establish the environmental fate of all components and impurities such that harmful human and environmental effects can be prevented.
- Provide to business management assessments and advice on potential hazards and risk-management options. Be prepared to re-evaluate products on the basis of user feedback on apparently unforeseen effects.
- Review all new uses of existing products to be sure that they do not pose significant risks to human health or the environment.



Key Responsibilities in Purchasing

This section covers all aspects of purchasing essential raw materials.

- Educate suppliers to Responsible Care and Product Stewardship expectations.
- Develop procurement procedures which include supplier's EHS performance evaluation criteria including regulatory compliance.
- Determine, and agree with suppliers, standards for those goods and services, which could affect the product. Ensure they supply according to that agreement.
- Require the provision of full information about the HS&E impacts of what they supply.
- Encourage suppliers also to practice Product Stewardship with other customers.
- Ensure that changes to product specifications or equipment have minimal adverse impact on product HS&E issues.
- Be aware of any relevant changes in legislation, customers' and markets' needs affecting the company's product range and manage their impacts on purchasing.
- Work with suppliers of goods and services to help them meet company HS&E standards and, where appropriate, include these considerations in purchasing policies.
- Communicate any changes in product specifications with relevant departments within the company. Implement a system to record and share supplier information with EHS staff, regulatory affairs staff, manufacturing, managers and others who need to know.



Key Responsibilities in Manufacturing

This section covers all aspects of manufacturing. (Packaging responsibilities are considered under Distribution on page 11).

- Practice conservation to improve continuously the efficiency of energy and raw material usage in production.
- Provide information about hazards and associated risks of the product(s) to employees, on-site contractors and to those members of the community who may be affected or who have an interest.
- Review for potential impacts on product risk characteristics, any proposed changes to the manufacturing process, before implementation. Review of information received from Extended Safety Data Sheets to determine if a downstream user chemical safety assessment is required.
- Ensure the product is handled in a manner, which protects employees, the local community and the environment.
- Set annual goals for waste minimisation and recycling activities to achieve continuous improvement.
- Be sensitive and responsive to community concerns about manufacturing operations. Recognise the desire of the public for access to information and communicate in an open and proactive way. Respond promptly to all complaints.
- Ensure that contract manufacturers are guided and supported to operate to these principles and to at least the same HS&E standards that would be used in-house. Periodically audit to confirm compliance.



Key Responsibilities in Customer Services, Marketing and Sales

This section deals with responsibilities in relation to the HS&E aspects for the appropriate marketing of the product and of all involved in the selling process through to the ultimate user.

- Treat effective Product Stewardship as an integral part of the total product offering for every product.
- Provide sufficient advance warning to ensure the preparation of HS&E advice is compatible with local laws.
- Ensure that marketing and sales staff understands their key role in communicating and providing guidance on safe use of products to customers. Put effective mechanisms in place, both to feed back information to the company on actual product use/potential misuse and to revise advice accordingly.
- Ensure checks are in place for new customers and/or any unusual orders to ascertain legitimacy of customer business and intended use of product(s).
- Ensure that complete, accurate and valid information and advice compatible with local legislation on the products is supplied to customers in the local language by means of safety data sheets. Any information given on labels and in other literature must be consistent with the safety data sheets.
- Ensure that all advertising and marketing material is legal, honest, truthful and consistent with the safety data sheets.
- Ensure customer performance and feedback of information about product use and take appropriate action where there are product HS&E implications.
- Have in place a regularly tested market emergency response system, including product recall, for dealing with accidents and incidents involving customers.
- Ensure that all staff in the customer service, marketing and sales departments are aware of their key responsibilities in terms of product use and product waste management.



Key Responsibilities in Distribution of Products

This section deals with the safe and environmentally sound handling of the product from the end of the manufacturing line through the product supply chain, on-site storage, all modes of transportation, packaging and repackaging and off-site storage until it is unloaded at customers' premises.

- Evaluate the risks and classify the hazards for all stages of storage and transportation.
- Clearly define, and obtain acceptance of, the roles and responsibilities of company personnel throughout the product supply chain both for in-company and contracted operations.
- Make sure that packaging is appropriate for the transportation and use of the product. Consider the merit of bulk supplies against the use of smaller containers, balancing the HS&E impacts against economic factors.
- Select modes of transportation appropriate for the product concerned.
- Ensure compliance with all applicable local, national and international transportation and distribution laws and regulations, and both government and industry codes of practice and guidelines.
- Provide HS&E information such as safety data sheets and correct labelling to all those who have responsibility for passing such information to others in the chain.
- Select and work with contractors according to Principle 8 (page 4), and provide appropriate training.
- Put in place a market emergency response system.

Note: The above responsibilities should also be implemented in conjunction with the key responsibilities listed in the Product Waste Management advice



Key responsibilities in Regulatory Affairs

This section deals with responsibilities in relation to all aspects of regulatory affairs

- Have an overview on how products are handled and used in the supply chain.
- Ensure that the raw materials purchased and products that are sold are compliant with all relevant regulations such as REACH and CLP.
- Classify products according to national/international regulations and communicate safe use information through the supply chain via safety data sheets and exposure scenarios and ensure that they are fully compatible with local laws of the country into which the product is sold. Information accompanying products outside the EU must be at least equivalent to that which is supplied to an EU customer.
- In developing countries take account of local circumstances relevant to good HS&E practice, such as levels of literacy, climate, local culture and infrastructure, standards of manufacturing practice, availability of adequate protective clothing and supervision.
- Where needed because of the hazardous nature of a product, ensure that training in its use is provided.
- Carry out horizon scanning to highlight any potential regulatory issues with either raw materials or products and determine the future impacts on the supply chain.
- Communicate with relevant departments within the company to ensure that regulatory procedures are understood and implement a system to record and share raw material and product regulatory compliance including any foreseen issues.
- Manage customer queries regarding the regulatory compliance and safe use of products and communicate issues up with supply chain when necessary.
- Obtain feedback from customers about their experience with the product. Learn from their HS&E experience and update your own advice to all customers accordingly.



Key responsibilities in Waste Disposal and Recovery

This section deals with responsibilities in relation to product waste disposal and recovery

- Identify all technical problems and HS&E hazards, likely to be posed by various methods of ultimate disposal of the product and packaging. Include consideration of minor components and impurities.
- Have knowledge of or access to local regulation and available facilities so that appropriate advice can be given for the disposal of products.
- Communicate with regulatory affairs departments to ensure that labels and safety data sheets give adequate information on waste disposal.
- Ensure that in-house experience is available to answer queries on disposal of product and packaging under normal and abnormal circumstances, including emergencies.
- Ensure all waste products in your own control are handled in accordance with the principles of the Duty of Care. Advise customers and users to operate similarly.
- Evaluate feasibility of recycling or reusing used and unused product or packaging as a means of minimising waste.
- Adopt processes leading to waste minimisation using the principles of Best Available Techniques (BAT) or Best Available Techniques Not Entailing Excessive Cost (BATNEEC).
- Have a vision for a circular economy by slowing, closing and narrowing energy and material loops.

Working for chemical and
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