

## **Inventories**

SB-FRS 2 *Inventories* applies to Statutory Boards for annual periods beginning on or after 1 April 2009.

This Standard is equivalent to FRS 2 *Inventories* issued by the Council on Corporate Disclosure and Governance on 22 February 2007.

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*paragraphs*

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Statutory Board Financial Reporting Standard 2 *Inventories* (SB-FRS 2) is set out in paragraphs 1-42 and the Appendix. All the paragraphs have equal authority. SB-FRS 2 should be read in the context of its objective, the *Preface to Statutory Board Financial Reporting Standards* and the *Framework for the Preparation and Presentation of Financial Statements*. SB-FRS 8 *Accounting Policies, Changes in Accounting Estimates and Errors* provides a basis for selecting and applying accounting policies in the absence of explicit guidance.

# STATUTORY BOARD FINANCIAL REPORTING STANDARD FRS 2

## Inventories

### Objective

1. The objective of this Standard is to prescribe the accounting treatment for inventories. A primary issue in accounting for inventories is the amount of cost to be recognised as an asset and carried forward until the related revenues are recognised. This Standard provides guidance on the determination of cost and its subsequent recognition as an expense, including any write-down to net realisable value. It also provides guidance on the cost formulas that are used to assign costs to inventories.

### Scope

2. ***This Standard applies to all inventories, except:***
  - (a) ***work in progress arising under construction contracts, including directly related service contracts (see SB-FRS 11 Construction Contracts);***
  - (b) ***financial instruments; and***
  - (c) ***biological assets related to agricultural activity and agricultural produce at the point of harvest (see SB-FRS 41 Agriculture).***
3. ***This Standard does not apply to the measurement of inventories held by:***
  - (a) ***producers of agricultural and forest products, agricultural produce after harvest, and minerals and mineral products, to the extent that they are measured at net realisable value in accordance with well-established practices in those industries. When such inventories are measured at net realisable value, changes in that value are recognised in profit or loss in the period of the change.***
  - (b) ***commodity broker-traders who measure their inventories at fair value less costs to sell. When such inventories are measured at fair value less costs to sell, changes in fair value less costs to sell are recognised in profit or loss in the period of the change.***
4. The inventories referred to in paragraph 3(a) are measured at net realisable value at certain stages of production. This occurs, for example, when agricultural crops have been harvested or minerals have been extracted and sale is assured under a forward contract or a government guarantee, or when an active market exists and there is a negligible risk of failure to sell. These inventories are excluded from only the measurement requirements of this Standard.
5. Broker-traders are those who buy or sell commodities for others or on their own account. The inventories referred to in paragraph 3(b) are principally acquired with the purpose of selling in the near future and generating a profit from fluctuations in price or broker-traders' margin. When these inventories are measured at fair value less costs to sell, they are excluded from only the measurement requirements of this Standard.

### Definitions

6. ***The following terms are used in this Standard with the meanings specified:***

**Inventories are assets:**

- (a) ***held for sale in the ordinary course of business;***
- (b) ***in the process of production for such sale; or***
- (c) ***in the form of materials or supplies to be consumed in the production process or in the rendering of services.***

***Net realisable value is the estimated selling price in the ordinary course of business less the estimated costs of completion and the estimated costs necessary to make the sale.***

***Fair value is the amount for which an asset could be exchanged, or a liability settled, between knowledgeable, willing parties in an arm's length transaction.***

- 7. Net realisable value refers to the net amount that an entity expects to realise from the sale of inventory in the ordinary course of business. Fair value reflects the amount for which the same inventory could be exchanged between knowledgeable and willing buyers and sellers in the marketplace. The former is an entity-specific value; the latter is not. Net realisable value for inventories may not equal fair value less costs to sell.
- 8. Inventories encompass goods purchased and held for resale including, for example, merchandise purchased by a retailer and held for resale, or land and other property held for resale. Inventories also encompass finished goods produced, or work in progress being produced, by the entity and include materials and supplies awaiting use in the production process. In the case of a service provider, inventories include the costs of the service, as described in paragraph 19, for which the entity has not yet recognised the related revenue (see SB-FRS 18 *Revenue*).

## **Measurement of Inventories**

- 9. ***Inventories shall be measured at the lower of cost and net realisable value.***

### **Cost of Inventories**

- 10. ***The cost of inventories shall comprise all costs of purchase, costs of conversion and other costs incurred in bringing the inventories to their present location and condition.***

#### **Costs of Purchase**

- 11. The costs of purchase of inventories comprise the purchase price, import duties and other taxes (other than those subsequently recoverable by the entity from the taxing authorities), and transport, handling and other costs directly attributable to the acquisition of finished goods, materials and services. Trade discounts, rebates and other similar items are deducted in determining the costs of purchase.

#### **Costs of Conversion**

- 12. The costs of conversion of inventories include costs directly related to the units of production, such as direct labour. They also include a systematic allocation of fixed and variable production overheads that are incurred in converting materials into finished goods. Fixed production overheads are those indirect costs of production that remain relatively constant regardless of the volume of production, such as depreciation and maintenance of factory buildings and equipment, and the cost of factory management and administration. Variable production overheads are those indirect costs of production that vary directly, or nearly directly, with the volume of production, such as indirect materials and indirect labour.
- 13. The allocation of fixed production overheads to the costs of conversion is based on the normal capacity of the production facilities. Normal capacity is the production expected to be

achieved on average over a number of periods or seasons under normal circumstances, taking into account the loss of capacity resulting from planned maintenance. The actual level of production may be used if it approximates normal capacity. The amount of fixed overhead allocated to each unit of production is not increased as a consequence of low production or idle plant. Unallocated overheads are recognised as an expense in the period in which they are incurred. In periods of abnormally high production, the amount of fixed overhead allocated to each unit of production is decreased so that inventories are not measured above cost. Variable production overheads are allocated to each unit of production on the basis of the actual use of the production facilities.

14. A production process may result in more than one product being produced simultaneously. This is the case, for example, when joint products are produced or when there is a main product and a by-product. When the costs of conversion of each product are not separately identifiable, they are allocated between the products on a rational and consistent basis. The allocation may be based, for example, on the relative sales value of each product either at the stage in the production process when the products become separately identifiable, or at the completion of production. Most by-products, by their nature, are immaterial. When this is the case, they are often measured at net realisable value and this value is deducted from the cost of the main product. As a result, the carrying amount of the main product is not materially different from its cost.

#### **Other Costs**

15. Other costs are included in the cost of inventories only to the extent that they are incurred in bringing the inventories to their present location and condition. For example, it may be appropriate to include non-production overheads or the costs of designing products for specific customers in the cost of inventories.
16. Examples of costs excluded from the cost of inventories and recognised as expenses in the period in which they are incurred are:
  - (a) abnormal amounts of wasted materials, labour or other production costs;
  - (b) storage costs, unless those costs are necessary in the production process before a further production stage;
  - (c) administrative overheads that do not contribute to bringing inventories to their present location and condition; and
  - (d) selling costs.
17. SB-FRS 23 *Borrowing Costs* identifies limited circumstances where borrowing costs are included in the cost of inventories.
18. An entity may purchase inventories on deferred settlement terms. When the arrangement effectively contains a financing element, that element, for example a difference between the purchase price for normal credit terms and the amount paid, is recognised as interest expense over the period of the financing.

#### **Cost of Inventories of a Service Provider**

19. To the extent that service providers have inventories, they measure them at the costs of their production. These costs consist primarily of the labour and other costs of personnel directly engaged in providing the service, including supervisory personnel, and attributable overheads. Labour and other costs relating to sales and general administrative personnel are not included but are recognised as expenses in the period in which they are incurred. The cost of inventories of a service provider does not include profit margins or non-attributable overheads that are often factored into prices charged by service providers.

#### **Cost of Agricultural Produce Harvested from Biological Assets**

20. In accordance with SB-FRS 41 *Agriculture*, inventories comprising agricultural produce that an entity has harvested from its biological assets are measured on initial recognition at their fair value less estimated point-of-sale costs at the point of harvest. This is the cost of the inventories at that date for application of this Standard.

## Techniques for the Measurement of Cost

21. Techniques for the measurement of the cost of inventories, such as the standard cost method or the retail method, may be used for convenience if the results approximate cost. Standard costs take into account normal levels of materials and supplies, labour, efficiency and capacity utilisation. They are regularly reviewed and, if necessary, revised in the light of current conditions.
22. The retail method is often used in the retail industry for measuring inventories of large numbers of rapidly changing items with similar margins for which it is impracticable to use other costing methods. The cost of the inventory is determined by reducing the sales value of the inventory by the appropriate percentage gross margin. The percentage used takes into consideration inventory that has been marked down to below its original selling price. An average percentage for each retail department is often used.

## Cost Formulas

23. ***The cost of inventories of items that are not ordinarily interchangeable and goods or services produced and segregated for specific projects shall be assigned by using specific identification of their individual costs.***
24. Specific identification of cost means that specific costs are attributed to identified items of inventory. This is the appropriate treatment for items that are segregated for a specific project, regardless of whether they have been bought or produced. However, specific identification of costs is inappropriate when there are large numbers of items of inventory that are ordinarily interchangeable. In such circumstances, the method of selecting those items that remain in inventories could be used to obtain predetermined effects on profit or loss.
25. ***The cost of inventories, other than those dealt with in paragraph 23, shall be assigned by using the first-in, first-out (FIFO) or weighted average cost formula. An entity shall use the same cost formula for all inventories having a similar nature and use to the entity. For inventories with a different nature or use, different cost formulas may be justified.***
26. For example, inventories used in one operating segment may have a use to the entity different from the same type of inventories used in another operating segment. However, a difference in geographical location of inventories (or in the respective tax rules), by itself, is not sufficient to justify the use of different cost formulas.
27. The FIFO formula assumes that the items of inventory that were purchased or produced first are sold first, and consequently the items remaining in inventory at the end of the period are those most recently purchased or produced. Under the weighted average cost formula, the cost of each item is determined from the weighted average of the cost of similar items at the beginning of a period and the cost of similar items purchased or produced during the period. The average may be calculated on a periodic basis, or as each additional shipment is received, depending upon the circumstances of the entity.

## Net Realisable Value

28. The cost of inventories may not be recoverable if those inventories are damaged, if they have become wholly or partially obsolete, or if their selling prices have declined. The cost of inventories may also not be recoverable if the estimated costs of completion or the estimated costs to be incurred to make the sale have increased. The practice of writing inventories down below cost to net realisable value is consistent with the view that assets should not be carried in excess of amounts expected to be realised from their sale or use.
29. Inventories are usually written down to net realisable value item by item. In some circumstances, however, it may be appropriate to group similar or related items. This may be



the case with items of inventory relating to the same product line that have similar purposes or end uses, are produced and marketed in the same geographical area, and cannot be practicably evaluated separately from other items in that product line. It is not appropriate to write inventories down on the basis of a classification of inventory, for example, finished goods, or all the inventories in a particular operating segment. Service providers generally accumulate costs in respect of each service for which a separate selling price is charged. Therefore, each such service is treated as a separate item.

30. Estimates of net realisable value are based on the most reliable evidence available at the time the estimates are made, of the amount the inventories are expected to realise. These estimates take into consideration fluctuations of price or cost directly relating to events occurring after the end of the period to the extent that such events confirm conditions existing at the end of the period.
31. Estimates of net realisable value also take into consideration the purpose for which the inventory is held. For example, the net realizable value of the quantity of inventory held to satisfy firm sales or service contracts is based on the contract price. If the sales contracts are for less than the inventory quantities held, the net realisable value of the excess is based on general selling prices. Provisions may arise from firm sales contracts in excess of inventory quantities held or from firm purchase contracts. Such provisions are dealt with under SB-FRS 37 *Provisions, Contingent Liabilities and Contingent Assets*.
32. Materials and other supplies held for use in the production of inventories are not written down below cost if the finished products in which they will be incorporated are expected to be sold at or above cost. However, when a decline in the price of materials indicates that the cost of the finished products exceeds net realisable value, the materials are written down to net realisable value. In such circumstances, the replacement cost of the materials may be the best available measure of their net realisable value.
33. A new assessment is made of net realisable value in each subsequent period. When the circumstances that previously caused inventories to be written down below cost no longer exist or when there is clear evidence of an increase in net realisable value because of changed economic circumstances, the amount of the write-down is reversed (i.e. the reversal is limited to the amount of the original write-down) so that the new carrying amount is the lower of the cost and the revised net realisable value. This occurs, for example, when an item of inventory that is carried at net realisable value, because its selling price has declined, is still on hand in a subsequent period and its selling price has increased.

## Recognition as an Expense

34. ***When inventories are sold, the carrying amount of those inventories shall be recognised as an expense in the period in which the related revenue is recognised. The amount of any write-down of inventories to net realisable value and all losses of inventories shall be recognised as an expense in the period the write-down or loss occurs. The amount of any reversal of any write-down of inventories, arising from an increase in net realisable value, shall be recognised as a reduction in the amount of inventories recognised as an expense in the period in which the reversal occurs.***
35. Some inventories may be allocated to other asset accounts, for example, inventory used as a component of self-constructed property, plant or equipment. Inventories allocated to another asset in this way are recognised as an expense during the useful life of that asset.

## Disclosure

36. ***The financial statements shall disclose:***
  - (a) ***the accounting policies adopted in measuring inventories, including the cost formula used;***

- (b) *the total carrying amount of inventories and the carrying amount in classifications appropriate to the entity;*
  - (c) *the carrying amount of inventories carried at fair value less costs to sell;*
  - (d) *the amount of inventories recognised as an expense during the period;*
  - (e) *the amount of any write-down of inventories recognised as an expense in the period in accordance with paragraph 34;*
  - (f) *the amount of any reversal of any write-down that is recognised as a reduction in the amount of inventories recognised as expense in the period in accordance with paragraph 34;*
  - (g) *the circumstances or events that led to the reversal of a write-down of inventories in accordance with paragraph 34; and*
  - (h) *the carrying amount of inventories pledged as security for liabilities.*
37. Information about the carrying amounts held in different classifications of inventories and the extent of the changes in these assets is useful to financial statement users. Common classifications of inventories are merchandise, production supplies, materials, work in progress and finished goods. The inventories of a service provider may be described as work in progress.
38. The amount of inventories recognised as an expense during the period, which is often referred to as cost of sales, consists of those costs previously included in the measurement of inventory that has now been sold and unallocated production overheads and abnormal amounts of production costs of inventories. The circumstances of the entity may also warrant the inclusion of other amounts, such as distribution costs.
39. Some entities adopt a format for profit or loss that results in amounts being disclosed other than the cost of inventories recognised as an expense during the period. Under this format, an entity presents an analysis of expenses using a classification based on the nature of expenses. In this case, the entity discloses the costs recognised as an expense for raw materials and consumables, labour costs and other costs together with the amount of the net change in inventories for the period.

## **Effective Date**

40. ***Statutory Boards shall apply this Standard for annual periods beginning on or after 1 January 2009.***