

# ACC 406: Cost of Goods Manufactured

TRAIN TO LEARN EFFECTIVELY: TIP SHEETS

## What is the Cost of Goods Manufactured?

The cost of goods manufactured summarizes the cost of activities that take place in a manufacturing plant over the period. The manufacturer starts by buying direct materials, which are stored in raw materials inventory until they are needed for production. Only those direct materials used in production are transferred out of raw materials inventory and into work in process (WIP) inventory. During production, the company uses direct labour and manufacturing overhead to convert these direct materials into a finished product. All units currently being manufactured are in WIP inventory. When the units are completed, they are moved out of WIP inventory into finished goods inventory. The amount transferred into finished goods inventory during the year is the cost of goods manufactured. After determining the Cost of Goods Manufactured, it is then used to calculate the Cost of Goods Sold on the Income Statement, as shown in Exhibit 2-13. The Schedule of Cost of Goods Manufactured (Exhibit 2-15) captures the flow of costs through the raw materials and WIP inventory accounts. The Income Statement (Exhibit 2-13) captures the flow of costs through the finished goods inventory account.

The finished units remain in finished goods inventory until they are sold. When the manufacturer sells finished units, the cost of those units becomes the cost of goods sold on the income statement. Costs incurred in nonmanufacturing elements of the value chain are expensed in the period incurred as operating expenses. These operating expenses are deducted from gross profit to obtain operating income.

## How do we calculate the Cost of Goods Manufactured?

The formula for the Cost of Goods Manufactured is as follows:

$$\text{Beginning WIP inventory} + \text{Direct materials used} + \text{Direct labour} + \text{Manufacturing overhead} - \text{Ending WIP inventory} = \text{Cost of Goods Manufactured}$$

## How do we calculate the Cost of Goods Sold?

The formula for the Cost of Goods Sold is as follows:

$$\text{Beginning finished goods inventory} + \text{Cost of Goods Manufactured} - \text{Ending finished goods inventory} = \text{Cost of Goods Sold}$$

NOTE: The formula for Cost of Goods Sold can also be broken down into 2 parts.

$$\text{Beginning finished goods inventory} + \text{Cost of Goods Manufactured} = \text{Cost of goods available for sale}$$
$$\text{Cost of goods available for sale} - \text{Ending finished goods inventory} = \text{Cost of Goods Sold}$$

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### Example 1:

Exhibit 2-15 Schedule of Cost of Goods Manufactured

TOP-FLITE Schedule of Cost of Goods Manufactured Year Ended December 31, 2017		
Beginning work in progress inventory .....		\$ 2,000
Add: Direct materials used		
Beginning raw materials inventory* .....	\$ 9,000	
Purchases of direct materials including freight-in and any import duties .....	<u>27,000</u>	
Available for use.....	36,000	
Ending raw materials inventory.....	<u>(22,000)</u>	
Direct materials used.....		\$14,000
Direct labour.....		19,000
Manufacturing overhead:		
Indirect materials .....	\$ 1,500	
Indirect labour .....	3,500	
Depreciation—plant and equipment.....	3,000	
Plant utilities, insurance, and property taxes .....	<u>4,000</u>	
Manufacturing overhead .....		<u>12,000</u>
Total manufacturing costs incurred during year .....		45,000
Total manufacturing costs to account for.....		47,000
Less: Ending work in process inventory.....		<u>(5,000)</u>
Costs of goods manufactured.....		<u>\$42,000</u>

\*For simplicity, we assume that Top-Flite's Raw Materials Inventory account contains only direct materials because the company uses indirect materials as soon as they are purchased.

Exhibit 2-13 Manufacturer's Income Statement

TOP-FLITE Income Statement Year Ended December 31, 2017		
Sales revenue .....		\$65,000
Cost of goods sold:		
Beginning finished goods inventory .....	\$ 6,000	
Cost of goods manufactured* .....	<u>42,000</u>	
Cost of goods available for sale.....	48,000	
Ending finished goods inventory.....	<u>(8,000)</u>	
Cost of goods sold.....		40,000
Gross profit .....		25,000
Operating expenses:		
Sales salary expense.....	3,000	
Delivery expense .....	<u>7,000</u>	
Operating income.....		<u>10,000</u>
		<u>\$15,000</u>

\*From the Schedule of Cost of Goods Manufactured in Exhibit 2-15.

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## Example 2:

### Example 2:

Monthly schedule cost of goods manufactured and income statement of Chili Manufacturing Company.

<b>Chili Manufacturing Company</b>			
<b>Schedule of Cost of Goods Manufactured</b>			
<b>Month Ended June 30, 2020</b>			
Beginning Work in Process Inventory			27000
Add: Direct Materials Used			
Beginning raw materials inventory	24000		
Purchases of direct materials	56000		
Available for use	80000		
Ending raw materials inventory	-28000		
Direct Materials Used		52000	
Direct Labour		79000	
Manufacturing Overhead		43000	
Total manufacturing costs incurred during the month			174000
Total manufacturing costs to account for			201000
Less: Ending Work in Process Inventory			-21000
Cost of Goods Manufactured			180000

<b>Chili Manufacturing Company</b>			
<b>Income Statement</b>			
<b>Month ended June 30, 2020</b>			
Sales Revenue			470000
Cost of Goods Sold:			
Beginning finished goods inventory	114000		
Cost of Goods Manufactured*	180000		
Cost of goods available for sale	294000		
Ending finished goods inventory	66000		
Cost of Goods Sold			228000
Gross Profit			242000
Operating expenses:			
Marketing expense	98000		
Administrative expense	68000		
Total expenses			166000
Operating income			76000
*From the Schedule of Cost of Goods Manufactured			