



human energy®

Pricing Support Deck

March 2021



Factors Affecting Finished Lubricant Cost

To understand the reasons for the rise in cost of finished lubricants, it's first important to understand the components that make up a finished lubricant product.

A finished lubricant product is made up of the following raw materials and components:



BASE OILS

“Basic lubricant building block.”

Makes up 80-99% of finished product

Factors Affecting Cost of Bases Oils

- Crude oil prices which determine the feedstock costs for base oils
- Competition for feedstock availability for other uses
- Supply/demand balance or capacity versus consumption

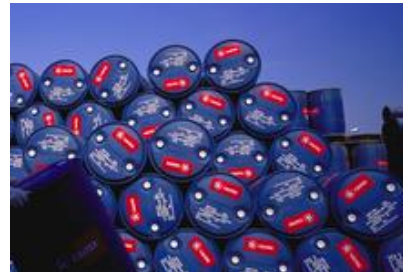


ADDITIVES

“Used to enhance the performance of an oil”

Factors Affecting Cost of Additives

- Crude oil prices, as many additives are derivatives of petrochemicals
- Base oil prices, as most additives contain base oil
- Supply/demand balance or capacity versus consumption



PACKAGING

“Ensures safe handling and consumer convenience”

Factors Affecting Cost of Packaging

- Crude oil prices, as plastics are derivatives of petrochemicals
- Steel costs driven by ore costs and milling capacity
- Supply/demand balance or capacity versus consumption



OTHER COMPONENTS

- Import Duties
- Freight Cost
- Manufacturing Cost

Single Biggest Finished Lubricant Cost Driver

Base Oil

- The biggest component affecting the price of a finished lubricant is the cost of base oil.
- Base oil makes up 80-99% of the total finished lubricant by volume.
- Base oil is also used in the manufacture of lubricant additives and quite often an increase in the cost of base oil will also lead to an increase in the cost of additives.



What is Driving Base Oil Prices?



Feedstock costs:

- “Due to the dramatic rise in feedstock prices, blenders have announced additional increases between 3% and 16%, scheduled to be implemented in April.” ([Lubes’n’Greases – U.S. Base Oil Price Report - March 9, 2021](#))
- “A majority of petrochemical plants experienced production issues during the cold snap a few weeks ago.” ([Lubes’n’Greases – U.S. Base Oil Price Report - March 10, 2021](#))
- This year is shaping up to be one like we have not seen in decades. There have been three increases in the price of base oil since December; moving base oil prices up by close to \$1.00 a gallon. In addition, the price of new steel drums moved up by close to \$10 a drum in the first quarter, and there have been 2 to 3 increases in resin postings. ([Jobbers World – Market Intelligence - March 1, 2021](#))

Base Oil Demand:

- “Several producers announced posted prices increases, driven by extremely tight supply conditions, rising crude oil and feedstock prices and steady demand. These adjustments followed the onset of a fresh round of price hikes that a few suppliers had started last week”. ([Lubes’n’Greases – U.S. Base Oil Price Report - February 24, 2021](#))
- “The unplanned shutdowns exacerbated an already tight supply and demand scenario”. ([Lubes’n’Greases – U.S. Base Oil Price Report - , March 10,2021](#))
- “Demand is healthy, especially amid supply tightness”.([ICIS Pricing – Base Oil Report – February 23, 2021](#))

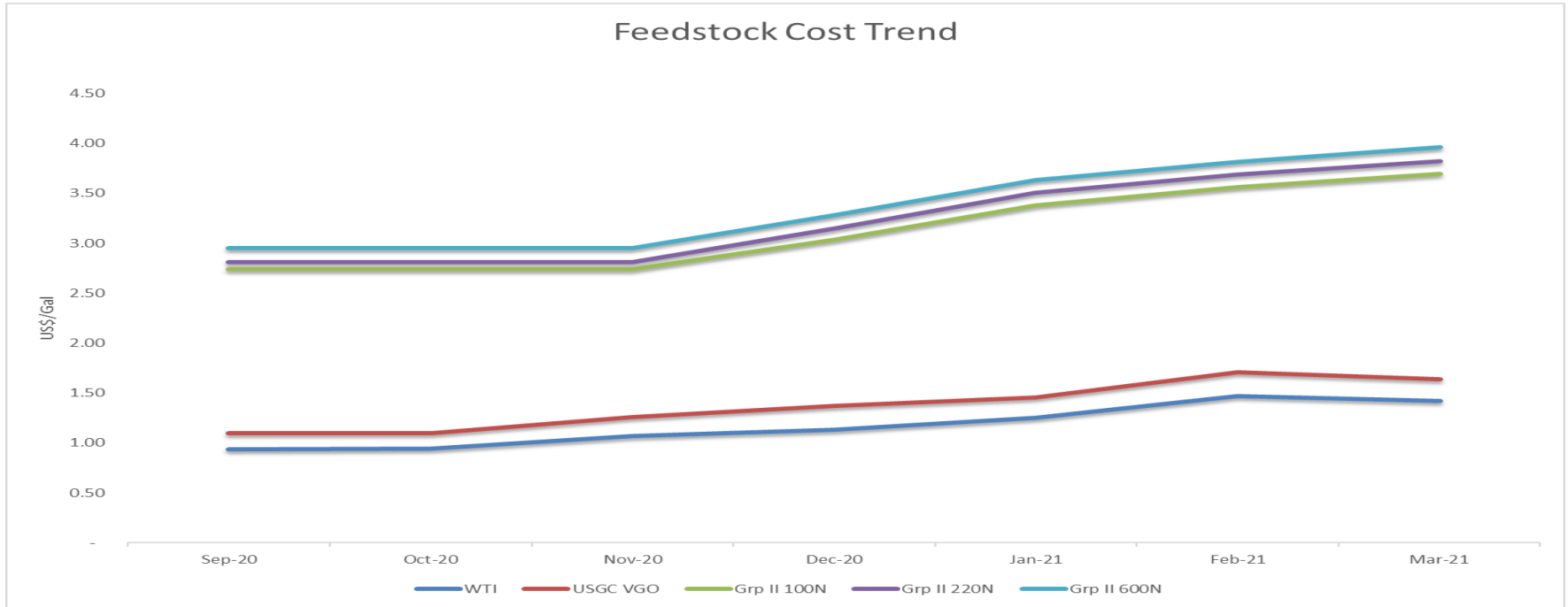
Supply for Base Oil:

- “The lack of power supply and deep freeze conditions forced a number of refineries to shut down, while the Houston Ship Channel was also expected to be closed”. ([Lubes’n’Greases– U.S. Base Oil Price Report – February 17, 2021](#))
- “The market continued to be afflicted by a lack of availability of a number of base oil grades leading to significant price jumps in recent weeks.”. ([Lubes’n’Greases – U.S. Base Oil Price Report - February 17, 2021](#))
- “Two United States base oil producers declared force majeure, following unplanned shutdowns due to extreme winter weather conditions, power and water supply outages, and transportation disruptions.” ([Lubes’n’Greases – U.S. Base Oil Price Report, February 17, 2021](#))



Base Oil and Feedstock Prices

Group II Base Oil Trend

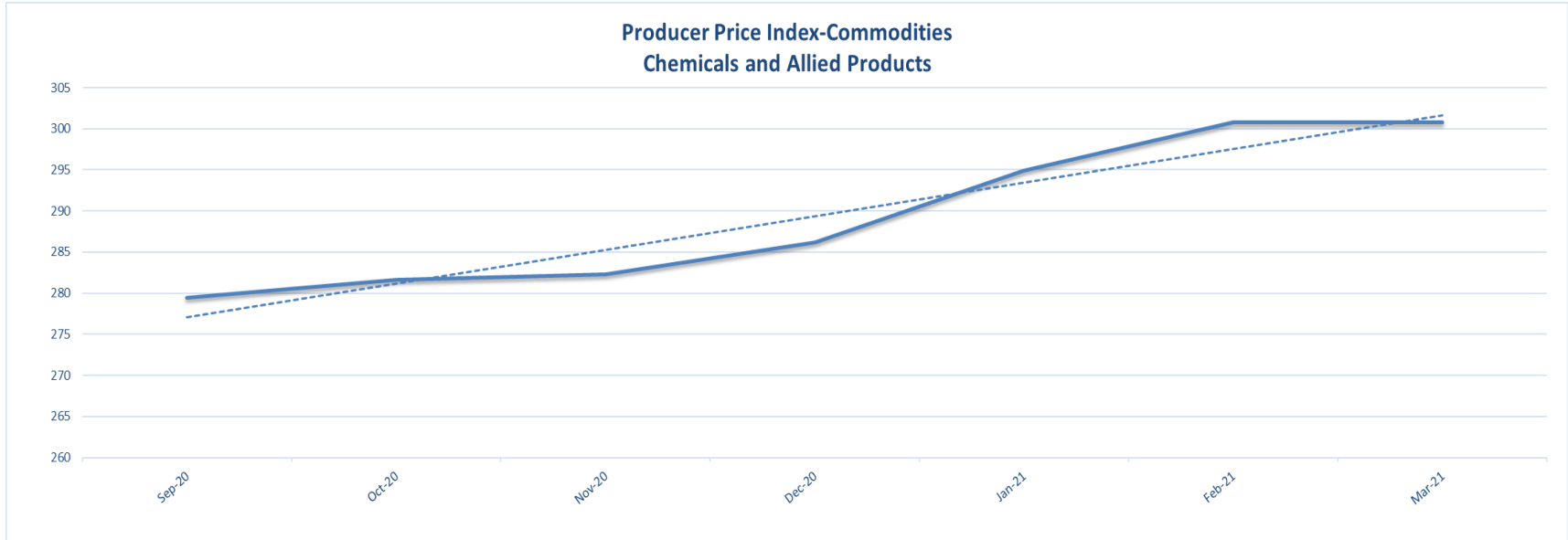


- USGC G2 average postings (Motiva, Excel Paralubes and Chevron)
- WTI crude increased by 52% since September 2020 and by 25% since year-end.
- VGO had an upward trend similar to crude.
- Group II base oil cost rose by 35% since September 2020, driven by four price increases due to tight supply conditions and higher crude prices.



Other Finished Lubricant Cost Component Additives

- The index below (PPI for Chemicals and Allied Products) was used as a representation for additives components.
- The data indicate an increase of 8% since September 2020 and 5% since year-end 2020.

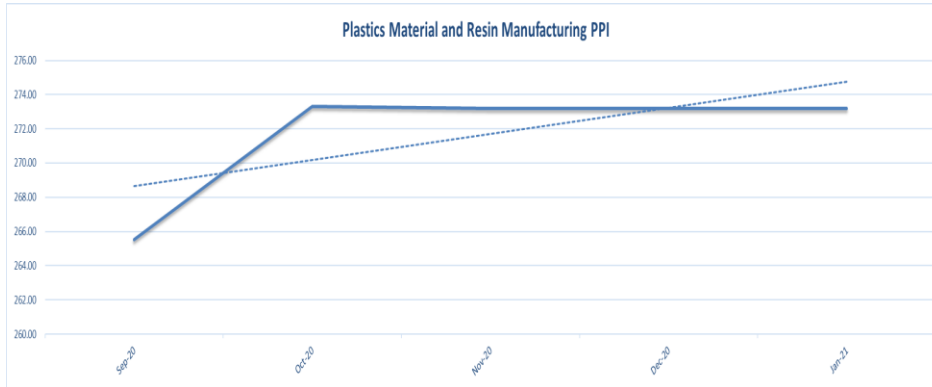


Source: United States Department of Labor, Bureau of Labor Statistics

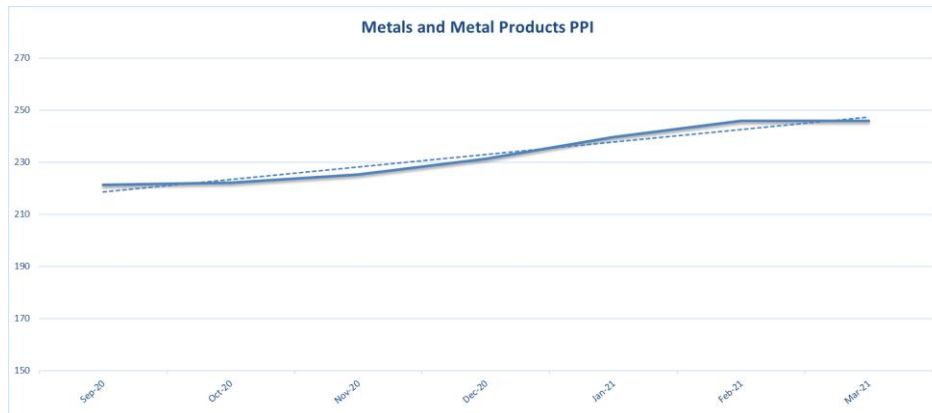


Other Finished Lubricant Cost Component

Packaging Cost Trend



- Plastics Material and Resin Manufacturing PPI increased 15% since September and 8% since December 2020.



- Metals and Metal Products PPI increased 11% over the last nine months. Since year-end 2020, the data indicate an upward trend of 6%.

Source: United States Department of Labor, Bureau of Labor Statistics

General Overview

An upward trend in all cost components since 3Q2020. The recent increase in base oil costs is driven by higher crude oil prices and supply constraints since the hurricane season which was followed by severe winter conditions in the United States.



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