



# BRB Lube oil Additives & Chemicals Business Unit Presentation

**WHO** is BRB International?



**Silicones, Lube oil Additives & Chemicals  
producer and provider**

BRB International, founded in 1981 and headquartered in the south of the Netherlands, is a dynamic and innovative company experienced in providing **technology solutions** with Silicones, Lube oil Additives and Chemicals.

BRB's strength lies in the **commitment** of its employees, **putting the customer first** and **being flexible** in both service and product solutions.

Our focus on R&D, technical support, unique customized products and a problem-solving mentality differentiates BRB from smaller suppliers and middleman distributors, but also from large multinationals.





## Vision

To be globally acknowledged as an independent producer, providing innovative customer solutions.



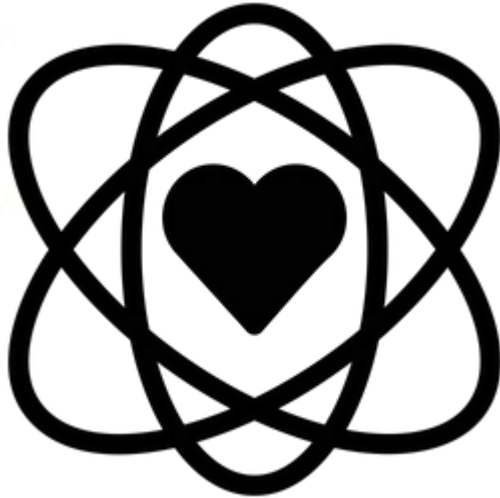
## Mission

To be a leading supplier, through an ambitious attitude, integrity, customer focus, quality in service and in products, committed to the business and its people. By using this unique combination of innovative thinking and a conservative mentality, a basis for stability, security and growth is formed.



## Culture

Working at BRB means working within a growing international and sales-oriented production organization. The culture of the organization is informal, ambitious, dynamic, and strongly customer-oriented.



## ***We are BRB Everything we do starts with our core values***

### **Ambition**

We do not stop until the job is done. We show enthusiasm and drive and are proud of results achieved.

### **Flexibility**

We will quickly respond to the wishes and requirements of clients, both internal and external. We think in terms of solutions.

### **Passion**

BRB employs people with the passion to meet the standards that are set, and to go the extra mile too. We want to serve our clients with passion, to show them that we have that little bit of extra enthusiasm and drive.

### **Innovation**

We create and utilize opportunities and stay ahead of the rest. We optimize processes to work smarter and be more efficiently.



**PETRONAS**

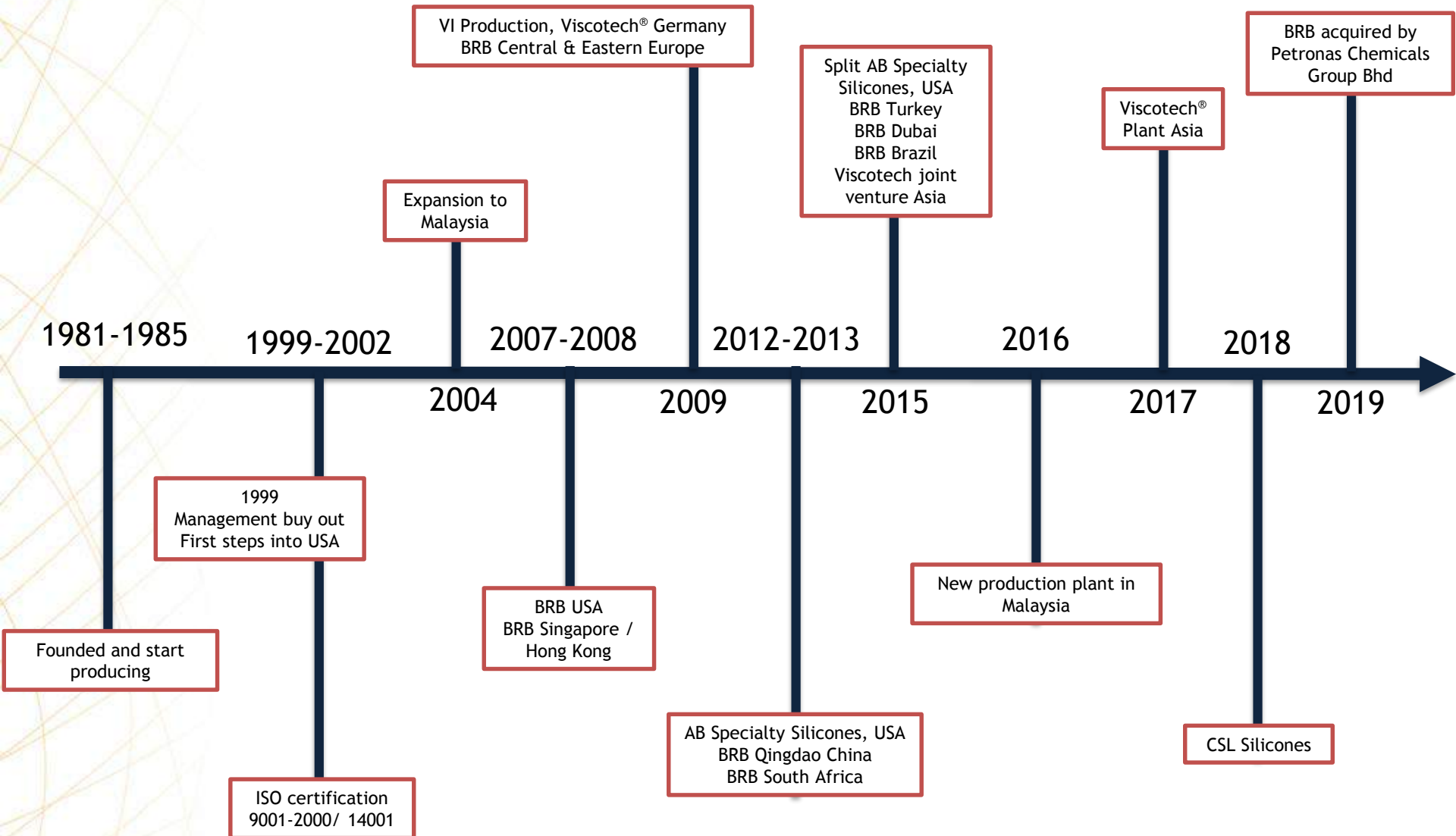
PETRONAS CHEMICALS GROUP BHD



Business Unit  
Silicones

Business Unit  
Lube oil Additives & Chemicals

# MILESTONES





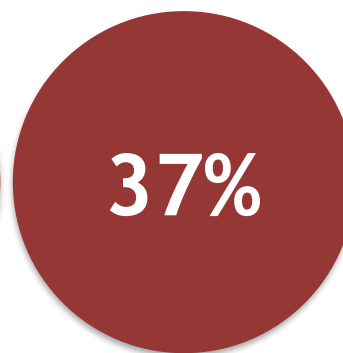
in millions €



Turnover 2019

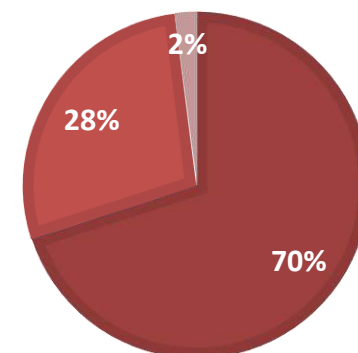


Budget Turnover 2019



% growth in Turnover 2014-2018

SALES VOLUME LAC 2019



■ Additives ■ Chemicals ■ Lubricants



# WHY BRB International?

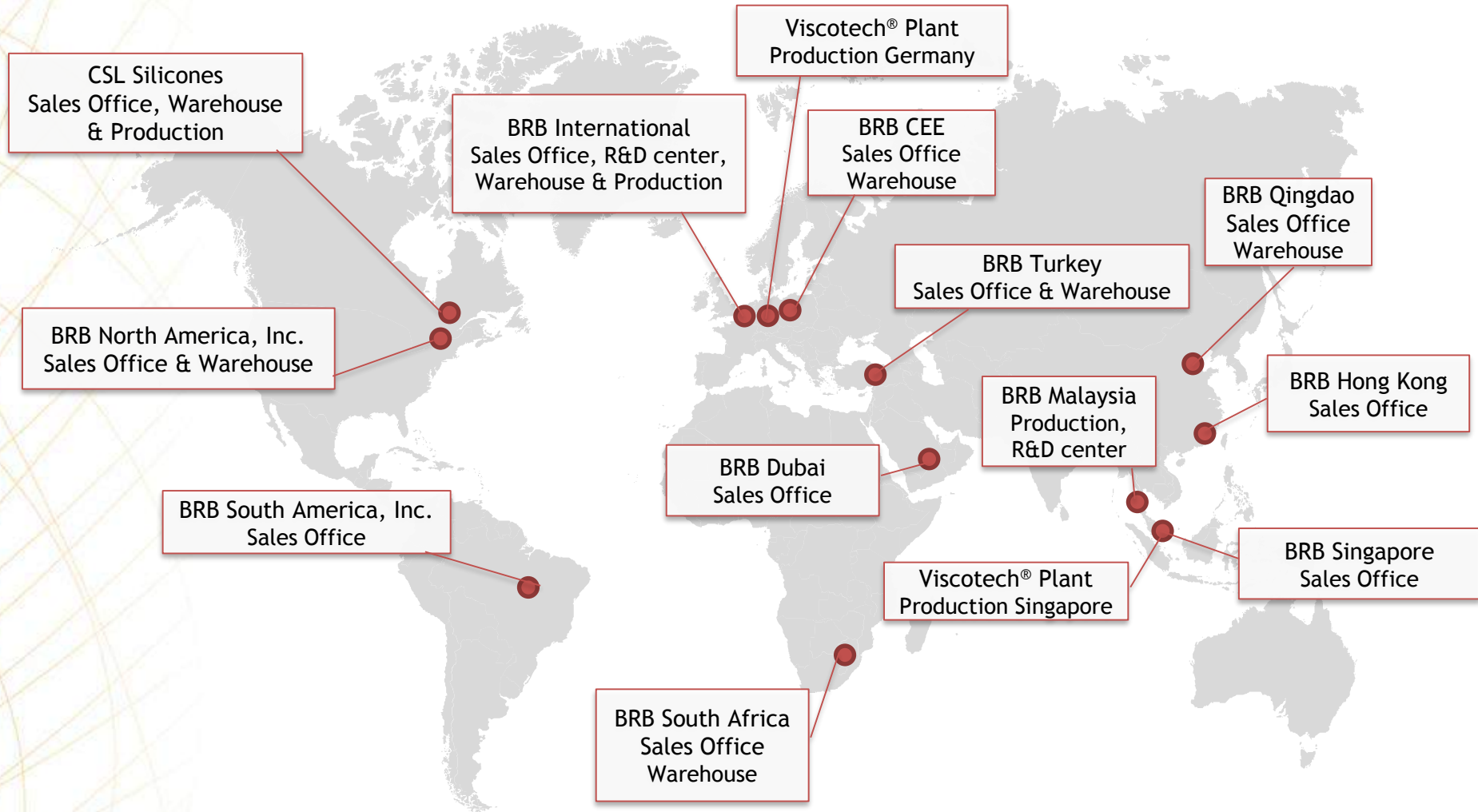


## Innovation through R&D

Research and Development is key within our markets. By investing in advanced research and test equipment, we can improve the quality of our products and set up projects with partners.

Besides our R&D centers in the Netherlands and Malaysia, we have a broad R&D network which enables us to maintain, improve and advance our product portfolio across the business areas of both business units.

# WHERE CAN YOU FIND US



Viscotech® Production Plants



**Germany**



**France**



**Singapore**



# WHO IS LUBE OIL ADDITIVES & CHEMICALS?

# Business Unit

## Lube oil Additives & Chemicals

### What do we do?

*Due to our high quality additives we facilitate automotive and industrial equipment to operate better and extend the lifecycle. We formulate and manufacture additives that improve the performance of lubricants and fuels.*

BRB Lube oil Additives & Chemicals has two registered brands:

- Petrolad® - Additives product range
- Viscotech® - Viscosity modifiers product range



## Vision 2020

*BRB Lube oil Additives & Chemicals is the number 1 choice for high quality, reliable, non-homologated lube oil additives and chemicals.*

# Business Unit

## Lube oil Additives & Chemicals

### More about Lube oil Additives & Chemicals

We are a global manufacturer and supplier of Lube oil Additives & Chemicals. BRB is an established player in the lubricants industry. We are an official member of several organizations, worldwide, representing the combined knowledge and expertise of lubricant manufacturers throughout the regions: VSN, ILMA, UNITI, ALMU and UEIL.





# Business Unit

## Lube oil Additives & Chemicals



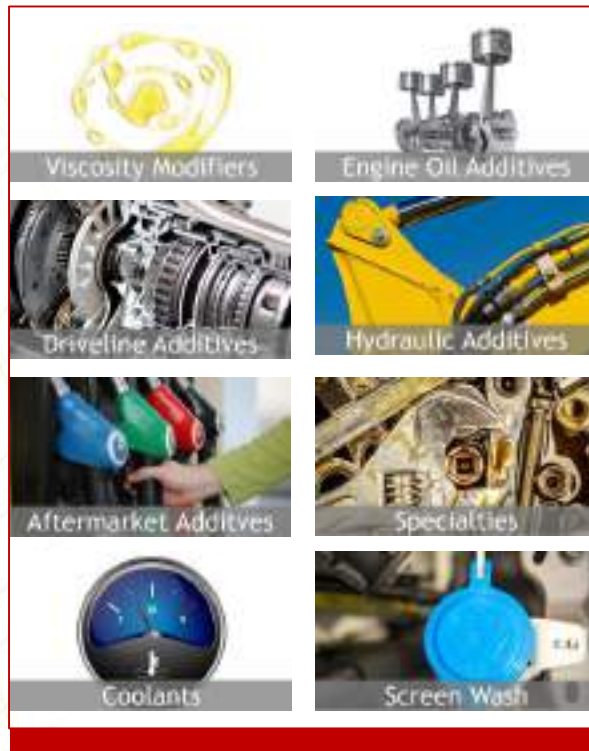
### Research & Development

Our goal is to offer a high level of flexibility to enable the development of new products to accommodate our customers.

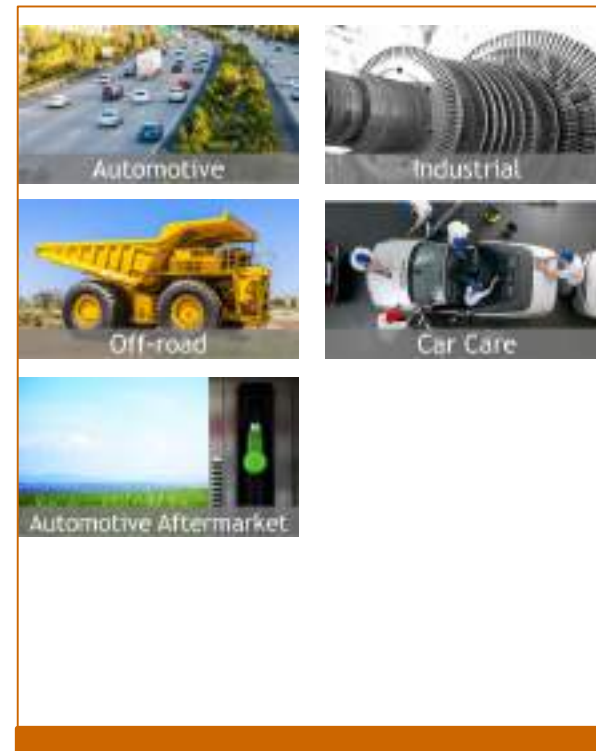
The laboratory is equipped with a variety of physicochemical characterization techniques: IR, UV-vis, GPC, GC, automatic titration, centrifuge, rheometer, densimeter, penetration measurement, refractometer, material tests frame, microscopy, 4ball, Kurt Orbahn, oxidation stability test, copper corrosion, pH-meter, Low temperature measurements, Stabinger, flame-point measurement and compatibility testing. In addition, mixing setups are used for the preparation of a wide range of products.

# Business Unit

## Lube oil Additives & Chemicals



**Our product lines**



**Industries we are active in**

**WHICH** PRODUCTS DO WE SUPPLY?

## QUICK PORTFOLIO OVERVIEW



- Lube oil Additives
  - Viscosity Modifiers
  - Engine oil Additives
  - Driveline Additives
  - Off-road Additives
  - Hydraulic Additives
  - Aftermarket Additives
- Chemicals
  - Coolants
  - Screen wash



# VISCOSITY MODIFIERS

## What is it?

Viscosity modifiers reduce the dependency of a lubricant's viscosity to change in temperature variation. Viscosity modifiers are used in many different applications, among which automotive engine oils.

***"Viscosity is defined as the resistance to flow!"***

Viscosity is temperature related, this is why we use VM in the oil.

**Viscotech®** provides the solution, by reducing the influence of temperature on viscosity and thus enabling smooth operation over a wide range of temperatures.



## Another viscosity?

We can produce in a wide range of viscosities. Should you require another viscosity as displayed, please contact us for the possibilities.

Polymer type	Viscotech® product	Kinematic Viscosity @ 100°C, ASTM D445	SSI, ASTM D6278
OCP TYPES			
Solid	6540	-	22
	6640	-	25
	6545	-	35
	6550	-	52
	073	-	70
Liquid	6540 L	1.000, 1.300	22
	6540 LP*	1.000, 1.300	22

\* Includes PPD

\*\* At 10% dillution in a GR11 BO

Polymer type	Viscotech® product	Kinematic Viscosity @ 100°C, ASTM D445	SSI, ASTM D6278
STYRENIC TYPES			
Solid	483	-	10
	533	-	3
	593	-	8
Liquid	483 L	1.200	10
	494 L	9,0**	7
	494 LD	8,5**	7
	533 L	1.600	3
	535 L	1.200	3
	536 L	1.300	3
	593 L	1.300	8
	595 L	1.200	8

## *ENGINE OIL ADDITIVES*



The main purpose of an engine oil is to lubricate and cool the components in an engine. When an engine burns fuel it degrades the oil within the engine. Therefore, for an engine to perform optimally, a good balance between the components that are added is necessary. The oil is used to reduce the friction, heat, and wear between mechanical components that are in contact with each other.

Our portfolio of Petrolad® engine oil additives meets different requirements for diesel and gasoline applications. We formulate and manufacture engine oil additives covering the high tier market as well as the lower tier market.

## ENGINE OIL ADDITIVES



### **Heavy Duty Diesel Oils (HDDO)**

Product designed for diesel and gasoline engine oil applications in the automotive lubricant industry.

- Petrolad® 8770

*API categories ranging from SB/CB to CC/CF*

### **Passenger Car Motor Oils (PCMO)**

Both below products are designed for diesel and gasoline engine oil applications

- Petrolad® 9200E

*API categories ranging from SB/CB to SL/CF and JASO T903:2016.*

- Petrolad® 8771SC

*API categories ranging from SB/CB to CF where high Sulphur fuels are commonly used*



## *DRIVELINE ADDITIVES*



Lubrication of a gearbox is vital because it transports mechanical power and changes the speed factor of motors.

We offer additive packages for gear oils, both manual and automatic transmission fluids applicable in the automotive and industrial market. The Petrolad® gear oil additive packages result in the formulation of low odor gear oils, due to a unique sulphurous/phosphorous technology.

## DRIVELINE ADDITIVES



### Gear oil

Low odor products designed for both automotive and industrial applications.

- Petrolad® 336  
*GL-5 performance at a 4.0 % w/w dosage*
- Petrolad® 336EP  
*GL-5 performance at a 4.0 % w/w dosage*  
*Extreme pressure version of Petrolad® 336*
- Petrolad® 339  
*GL-4 performance at a 2.0 % w/w dosage*  
*GL-5 performance at a 4.0 % w/w dosage*  
*Premium gear oil additive package*

### Automatic Transmission Fluids (ATF)

Multi-purpose low ash additive package

- Petrolad® 743EU  
*Dexron IIIH (General Motors) and MERCON (Ford),*  
*suitable for Dexron IID*

## *OFF-ROAD ADDITIVES*



Off-road equipment needs to have good maintenance in order to perform. Off-roading is the activity of driving or riding a vehicle on unsurfaced roads or tracks, made of materials such as sand, gravel, riverbeds, mud, snow, rocks, and other natural terrain.

We offer tractor oil additives to formulate Universal Tractor Transmission Oils (UTTO) and Super Tractor Universal Oils (STOU). These packages can also be used to formulate non-farm applications that have wet brakes, power shift transmissions and hydraulics.

## OFF-ROAD ADDITIVES

### Universal Tractor Transmission Oil (UTTO)

Package suitable for transmissions, power steering and hydraulic systems.

- Petrolad® 5101

*Meets specification requirements at a treat rate of 6.0 wt. %:*

- John Deere J20C/J20D
- J.I. Case MS 1205/1206/1207/1209/1210
- Massey Ferguson CMS M1135/41/43/45
- Ford M2C 86B/C, 134D
- Case New Holland MAT 3505, 3525/3526





## OFF-ROAD ADDITIVES

### Super Tractor Oil Universal (STOU)

Package suitable for crankcase, transmissions, power steering and hydraulic systems

- Petrolad® 5201

*Meets specification requirements at a treat rate of 10.0 wt. %:*

- John Deere J27
- Massey Ferguson CMS 1145, 1144, 1139
- Allison C-4
- Ford M2C159B
- API GL-4
- ZF TE ML 06A/B/C/D, 07B
- MIL-L-2104D
- Caterpillar TO-2
- API CE/CF/CF-4/CG-4/SF
- MB 227.1, 228.1, 228.3
- MAN 271



## *INDUSTRIAL ADDITIVES*

### Hydraulic additives

The primary use of hydraulic oil is to transfer power within hydraulic systems. When a force is applied to the non-compressible hydraulic fluid, usually from a piston within a cylinder, the oil is pushed through the hydraulic system and ultimately produces a force on another part of the system. This results in a movement or action.

BRB offers hydraulic oil additive packages that will ensure efficient equipment operation. Our high-performance hydraulic fluid additives offer outstanding corrosion protection, good filterability, demulsification and excellent anti-wear properties. These benefits will extend fluid and equipment life.



## INDUSTRIAL ADDITIVES



### Ashless hydraulic addiitve package

Designed to formulate ashless hydraulic fluids and compressor fluids based on mineral oils as well PAO/ester based oils

- Petrolad® 1846

*Meets specification requirements:*

- Denision HF0
- DIN 51524, Part 2 and 3 (HLP, HVLP)
- GE GEK 32568 A/C
- Cincinnati
- Afnor NF E 48-603

# COMPONENTS

## Sulfonates

Under the Petrolad® brand name, BRB offers an over based calcium sulfonate, which is used as a detergent, acid neutralizer and rust inhibitor in many fields of applications.

### Overbased Calcium Sulfonate Detergent

A 400 TBN overbased calcium sulfonate detergency and rust-inhibitor

- Petrolad® 6779 series

Normal dosages would range from 0.5 to 5.0 % w/w in the finished lubricant.





## CHEMICALS



### Coolants

BRB provides OEM approved coolants. We fill the ready mix coolants in customer specific packaging and a private label with our own filling line. With our cross-docking service we offer a lean logistics solution that meets the challenges of modern distribution.

We have a longterm collaboration with OEM's, both in the passenger car and truck segment. The coolants are also linked to other chemicals such as screenwash, car care products and a broad portfolio of other aftermarket products.

**CONTACT US,**  
challenge us!



# Formulating future additives

**BRB International BV**

Europastraat 5  
NL-6014 CD Ittervoort  
The Netherlands

[info@brbbv.com](mailto:info@brbbv.com)  
+31 475 560 300  
[brb-international.com/lac](http://brb-international.com/lac)



BRB has more than 10 locations worldwide from which we supply our markets and meet our customer's needs. Get in contact with us by scanning this code.