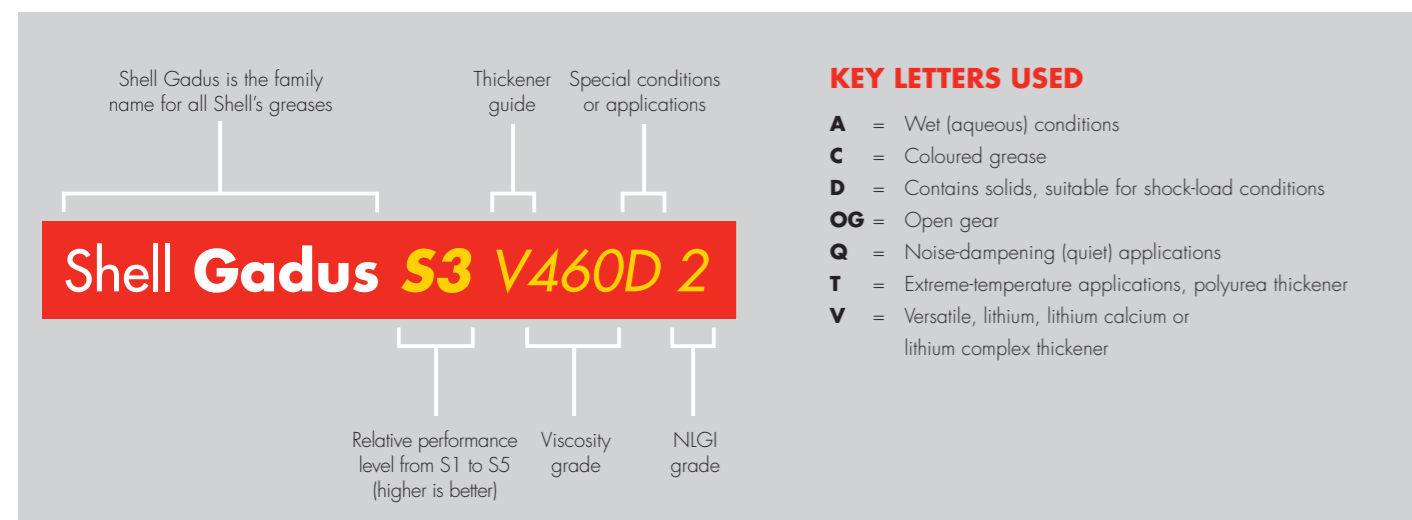


**HELPFUL PRODUCT NAMES**

There are at least four properties that you should look for when selecting a grease:

- thickener type
- oil viscosity
- operating conditions and application
- NLGI grade (consistency).

Shell's Gadus greases have names based on these properties that aim to help you select the right products for your needs.



**FULL PRODUCT AND SERVICE PORTFOLIO**

Shell Lubricants is the number-one finished lubricants supplier<sup>2</sup> and has a 60-year history of innovation. It constantly invests to develop better lubrication solutions, including advanced synthetic technologies such as

- Shell Tellus S4 ME synthetic hydraulic oil – for long life and energy saving
- Shell Corena S4 R air compressor oil – for up to 12,000 hours of protection.

In addition, Shell provides the world-leading Shell LubeAnalyst oil condition monitoring service, which is designed to help improve your business performance.

Whatever your needs or application, Shell can provide a full range of oils and greases, including synthetic, high-performance products and additional services.



Product	Benefits	Technology (Thickener, base oil and key properties)	ISO viscosity grade	NLGI grade	Specifications and approvals (Ask your Shell representative for full approval details. Approvals and claims vary by viscosity grade.)
<b>Shell Gadus "V" range</b>					
Shell Gadus 55 V100	<ul style="list-style-type: none"> <li>■ Long life</li> <li>■ Improved efficiency</li> <li>■ Lithium complex</li> </ul>	Lithium complex, synthetic	100	2	Approved: Vestas Wind Systems Listings: ABB, CH Schäfer Getriebe, FLSmidh, HegenscheidMFD and perma Schmiersysteme
Shell Gadus 53 V220C	<ul style="list-style-type: none"> <li>■ Extra protection</li> <li>■ High temperature</li> <li>■ Red lithium complex</li> </ul>	Lithium complex, mineral, EP	220	1, 2	Specification: Meets ASTM D4950-08 GC-1B. Approved: Aichelin, Dexter Axle, Ser-Norge Aluminium and Willy Vogel Listings: Listed by over 20 major companies from a wide variety of industries.
Shell Gadus 53 V460D	<ul style="list-style-type: none"> <li>■ Heavy-duty protection</li> <li>■ High temperature</li> <li>■ Lithium complex</li> </ul>	Lithium complex, mineral, EP, solid EP additive (MoS <sub>2</sub> )	460	2	Specification: Meets Caterpillar, Liebherr and P&H Mining Equipment Approved: Bucyrus International, CMI FFE Ltd, Gebr. Pfeiffer perma Schmiersysteme, Rothe Erde, SMS Meer and Voith Listings: BE (certified), Bucyrus International, CMI Groupe, Dieffenbacher, Gebr. Pfeiffer, Hitachi, Konecranes and Komatsu Mining
Shell Gadus 52 V100	<ul style="list-style-type: none"> <li>■ Reliable protection</li> <li>■ Multipurpose</li> <li>■ Lithium</li> </ul>	Lithium, mineral	100	1, 2, 3	Approved: Approved by 18 major companies from a wide variety of industries. Listings: Listed by over 60 major companies from a wide variety of industries.
Shell Gadus 52 V220	<ul style="list-style-type: none"> <li>■ Reliable protection</li> <li>■ Multipurpose</li> <li>■ Lithium</li> </ul>	Lithium, mineral, EP	220	00, 0, 1, 2, 3	Specification: Meets ASTM D4950-08 1B Approved: Approved by 24 major companies from a wide variety of industries. Listings: Listed by over 100 companies from a wide variety of industries.
Shell Gadus 52 V220AD	<ul style="list-style-type: none"> <li>■ Heavy-duty protection</li> <li>■ Water resistant</li> <li>■ Lithium calcium</li> </ul>	Lithium calcium, mineral, EP, solid EP additive (MoS <sub>2</sub> )	220	1, 2	Approved: Sandvik (endorsed) and Xiamen XGMA Machinery Listings: Listed by 12 major companies from a wide variety of industries.
Shell Gadus 52 V220AC	<ul style="list-style-type: none"> <li>■ Heavy-duty protection</li> <li>■ Water resistant</li> <li>■ Red lithium calcium</li> </ul>	Lithium calcium, mineral, soluble EP additive	220	0, 1, 1.5, 2, 3	Approved: Willy Vogel Specification: Meets ASTM D4950-08 1B Listings: David Brown, Daniell, Eirich, Harburg-Freudenberger Maschinenbau, Maschinenfabrik Gustav Eirich, New Zealand Steel, Ondrives, Power Jacks Group, Tetra Pak International, ZZ-Antriebe
<b>Shell Gadus speciality ranges</b> Contact your Shell representative for details					
<b>Shell Gadus "Q" greases</b> for noise-dampening (quiet) applications					
<b>Shell Gadus automotive greases</b> for automotive components, from door-lock motors to steering systems and constant-velocity joints					
<b>Shell Gadus "OG" lubricants</b> for mobile and stationary open-gear applications requiring spray or fluid bath lubrication					
<b>Shell GadusRail greases</b> meet European and American railway specifications, especially for railway applications, including axle journal bearings, traction motor bearings and curve rails					
<b>Shell Tactic EMV</b> automatic single-point lubricators – available with a selected range of high-performance Gadus greases					
<b>Related products</b> Contact your Shell representative for details					

FOR MORE INFORMATION, PLEASE CONTACT

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"Shell Lubricants" refers to the various Shell companies engaged in the lubricants business.

<sup>1</sup>Saving reported by one customer. Actual savings may vary, depending on the application, the current oil used, the maintenance procedures and the condition of the equipment.

<sup>2</sup>Source: Kline & Company, "Competitive Intelligence for the Global Lubricants Industry, 2008-2018."

shell.com/lubricants



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**DESIGNED TO DO MORE.  
JUST LIKE OUR GREASES  
– SHELL GADUS.**

**DESIGNED TO MEET CHALLENGES**





**SHELL GADUS IS A COMPREHENSIVE FAMILY OF GREASES DESIGNED TO MEET YOUR NEEDS.**

Shell Gadus is a comprehensive family of greases designed to meet your needs. The Gadus ranges include multipurpose greases that are designed to help simplify your product inventory, as well as speciality greases, including advanced polyurea synthetic products designed for the most severe extreme-temperature and long-life applications, and a range of open-gear lubricants.

Whether you need greases for steel production, mining, construction, power generation, general or automotive manufacturing, other applications or your vehicles, Shell has a grease designed to best meet your challenges.

The Shell Gadus range has been developed to deliver optimum value through

- enhanced wear protection
- long grease life
- system efficiency.

**WEAR PROTECTION**

Equipment wear can reduce system efficiency and service life. Protecting components from wear is fundamental for getting the most out of your investments through prolonging asset life and preventing production losses through breakdowns.

The Shell Gadus range of greases offers protection across a wide range of applications. The range includes Shell's latest extreme-temperature "T" polyurea synthetic greases, which can help to protect bearings under extreme temperatures, heavy loads and contaminated conditions.

**GREASE LIFE**

The longer your grease lasts, the longer your components last and the less lubrication maintenance your equipment needs. Shell Gadus greases are designed to help your equipment continue to operate without interruption. The comprehensive product range enables you to select a grease with a life that meets your operational needs.

Customers using Shell Gadus extra-long-life synthetic technologies are doubling grease life for some applications. Others prefer to take advantage of cost-effective, reliable, multipurpose Shell Gadus greases for standard life applications.

**SYSTEM EFFICIENCY**

To help your equipment perform to its design standards, you need a grease that stays in place and provides effective protection and lubrication where you need it.

Shell Gadus greases are designed to help maintain or even improve the efficiency of your systems. From greases that offer reliable performance for standard applications to specialist low-noise, high-temperature and heavy-load greases, there is a Shell Gadus product that can help to optimise your system's efficiency and costs of operation.

**A WIDE RANGE OF THICKENER TECHNOLOGIES**

Different applications and conditions require different thickeners. The Shell Gadus range uses a wide range of thickener technologies, each with relative benefits.

Thickener guide	Thickener	Temperature	Water resistance	Shear and vibration stability
T	Polyurea	✓✓✓✓	✓✓✓	✓✓✓✓
V	Lithium complex	✓✓✓✓	✓✓✓	✓✓✓✓
V	Lithium calcium	✓✓	✓✓✓✓	✓✓✓
V	Lithium	✓✓	✓✓	✓✓✓
A	Calcium	✓	✓✓✓	✓✓✓
U	PTFE	✓✓✓✓	✓✓✓✓	✓✓✓✓
U	Clay	✓✓✓✓	✓✓	✓✓✓

- T** = Extreme-temperature performance using Shell polyurea thickeners
- V** = Versatile, multipurpose application using lithium and lithium complex thickeners
- A** = Thickeners for wet (aqueous) conditions
- U** = Unusual non-melting thickeners or other applications

**SHELL'S ADVANCED POLYUREA "T" THICKENER**

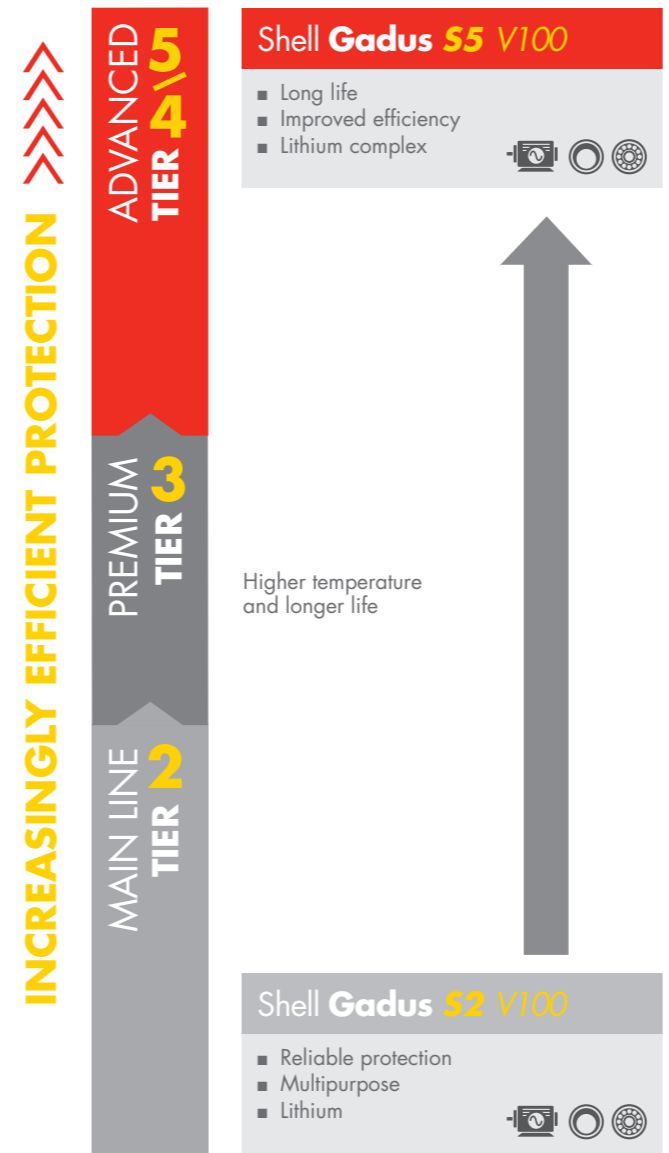
Shell's research teams have developed superior greases using advanced polyurea thickener technology. These products are designed to outperform conventional greases in extreme-temperature applications, such as electric motors and automotive constant-velocity joints. In one example, a global steel manufacturer reported that it reduced bearing failure rates by 75% and grease consumption by 30% through switching to Shell Gadus S3 T100 polyurea technology grease.

**FIT-FOR-PURPOSE PROTECTION**

Using the right grease for your needs can deliver significant savings. For example, a construction company reports saving \$3.8 million<sup>1</sup> a year through changing to Shell Gadus S3 V460D 2 grease, which provided the protection needed for performing heavy-duty work. The grease is extending excavator component life by 40%, reducing downtime and maintenance costs, and increasing equipment availability.

**A RANGE OF GREASES TO MEET YOUR NEEDS**

GREASE BASE OIL VISCOSITY	MULTIPURPOSE		MULTIPURPOSE EXTREME PRESSURE (EP)		HEAVY-DUTY MULTIPURPOSE
	100	220	220	460	460
	Bearing carrying low loads at higher speeds		Bearing carrying medium loads at medium speeds		Bearing carrying heavy loads at lower speeds and shock loads
	Auxiliary industrial equipment, including electrical motors and fans, and lightly loaded roller element or plain bearings		Roller element or plain bearings for industry and transport		Large roller element or plain bearings for industry and transport
	DRY ENVIRONMENTS		WET ENVIRONMENTS		



**SPECIAL APPLICATIONS AND PRODUCTS**

This table highlights several Shell Gadus greases to illustrate the range. Whatever your application, there is a Shell Gadus grease designed to meet your needs, including specialist products such as Shell Gadus S2 V100Q for noise-dampening (quiet) applications and Shell Tactic EMV automatic, single-point lubricators.

**Contact your Shell representative for details.**

**Shell Gadus S3 V220C**

- Extra protection
- High temperature
- Red lithium complex

**Shell Gadus S3 V460D**

- Heavy-duty protection
- High temperature
- Lithium complex

**Shell Gadus S2 V220AD**

- Heavy-duty protection
- Water resistant
- Lithium calcium

**Shell Gadus S2 V220**

- Reliable protection
- Multipurpose
- Lithium

**Shell Gadus S2 V220AC**

- Reliable protection
- Water resistant
- Red lithium calcium

Higher temperature, heavier load and greater shock load

Higher temperature

Better in water

Better shock load and better in water

- Electric motor
- Plain bearing
- Rolling element bearing
- High temperature
- Extreme pressure
- Wet conditions
- Shock load

**PERFORMANCE THAT YOU CAN RELY ON**

The way a grease is made has a huge impact on its performance. Shell manufactures grease in a highly controlled and systematic way, from precisely specifying the ingredients to detailing how it is packaged, shipped and delivered. This quality process ensures that every batch you receive, no matter where in the world it is made, gives you the same high performance levels.

**NEED EXPERT ADVICE?**

Shell has on-the-ground grease specialists, supported by a global network of technicians, who can help to design a complete lubricant solution for your needs or work with you to solve a specific lubrication problem.



**LEADING TECHNOLOGY**

Shell's international research and development team works in close co-operation with customers and equipment makers to create the latest advanced-technology greases. These greases are designed to outperform conventional greases by combining a wide range of thickener technologies, which keep the grease in place under different conditions, with innovative oils that provide efficient lubrication and protection.