



ویرا پرداز آروین پاسارگاد

با مدیریت خانم مهندس احمدی



جهت مشاوره

با کارشناسان فنی

با ما در ارتباط باشید



021 - 91001377



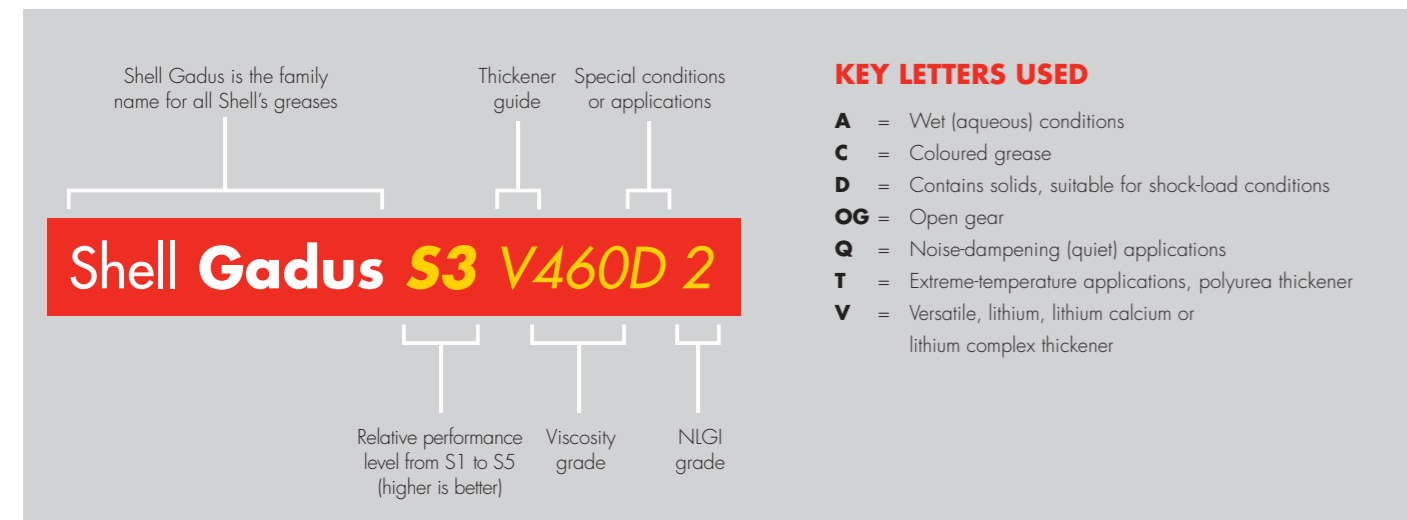
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HELPFUL PRODUCT NAMES

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 supplier² 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.)
Shell Gadus "V" range					
Shell Gadus S5 V100	<ul style="list-style-type: none"> ■ Long life ■ Improved efficiency ■ Lithium complex 	Lithium complex, synthetic	100	2	Approved: Vestas Wind Systems Listings: ABB, CH Schäfer Getriebe, FLSmidh, Hegenscheidt/MFD and perma Schmier-systeme
Shell Gadus S3 V220C	<ul style="list-style-type: none"> ■ Extra protection ■ High temperature ■ Red lithium complex 	Lithium complex, mineral, EP	220	1, 2	Specification: Meets ASTM D4950-08 GC1B. 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 S3 V460D	<ul style="list-style-type: none"> ■ Heavy-duty protection ■ High temperature ■ Lithium complex 	Lithium complex, mineral, EP, solid EP additive (MoS ₂)	460	2	Specification: Meets Caterpillar, Liebherr and P&H Mining Equipment Approved: Bucyrus International, CMI FPE Ltd, Gebr. Pfeiffer perma Schmier-systeme, Rothe Erde, SMS Meer and Voith Listings: BE (certified), Bucyrus International, CMI Groupe, Dieffenbacher, Gebr. Pfeiffer, Hitachi, Konecranes and Komatsu Mining
Shell Gadus S2 V100	<ul style="list-style-type: none"> ■ Reliable protection ■ Multipurpose ■ Lithium 	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 S2 V220	<ul style="list-style-type: none"> ■ Reliable protection ■ Multipurpose ■ Lithium 	Lithium, mineral, EP	220	00, 0, 1, 2, 3	Specification: Meets ASTM D4950-08 LB 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 S2 V220AD	<ul style="list-style-type: none"> ■ Heavy-duty protection ■ Water resistant ■ Lithium calcium 	Lithium calcium, mineral, EP, solid EP additive (MoS ₂)	220	1, 2	Approved: Sandvik (endorsed) and Xiamen XGMA Machinery Listings: Listed by 12 major companies from a wide variety of industries.
Shell Gadus S2 V220AC	<ul style="list-style-type: none"> ■ Heavy-duty protection ■ Water resistant ■ Red lithium calcium 	Lithium calcium, mineral, soluble EP additive	220	0, 1, 1.5, 2, 3	Approved: Willy Vogel Specification: Meets ASTM D4950-08 LB Listings: David Brown, Danieli, Eirich, Harburg-Freudenberger Maschinenbau, Maschinenfabrik Gustav Eirich, New Zealand Steel, Ondrives, Power Jacks Group, Tetra Pak International, ZZ-Antriebe
Shell Gadus speciality ranges Contact your Shell representative for details					
Shell Gadus "Q" greases for noise-dampening (quiet) applications					
Shell Gadus automotive greases for automotive components, from door-lock motors to steering systems and constant-velocity joints					
Shell Gadus "OG" lubricants for mobile and stationary open-gear applications requiring spray or fluid bath lubrication					
Shell GadusRail greases meet European and American railway specifications, especially for railway applications, including axle journal bearings, traction motor bearings and curve rails					
Shell Tactic EMV automatic single-point lubricators – available with a selected range of high-performance Gadus greases					
Related products Contact your Shell representative for details					

FOR MORE INFORMATION, PLEASE CONTACT

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

¹Saving 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.

²Source: 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.

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.



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.

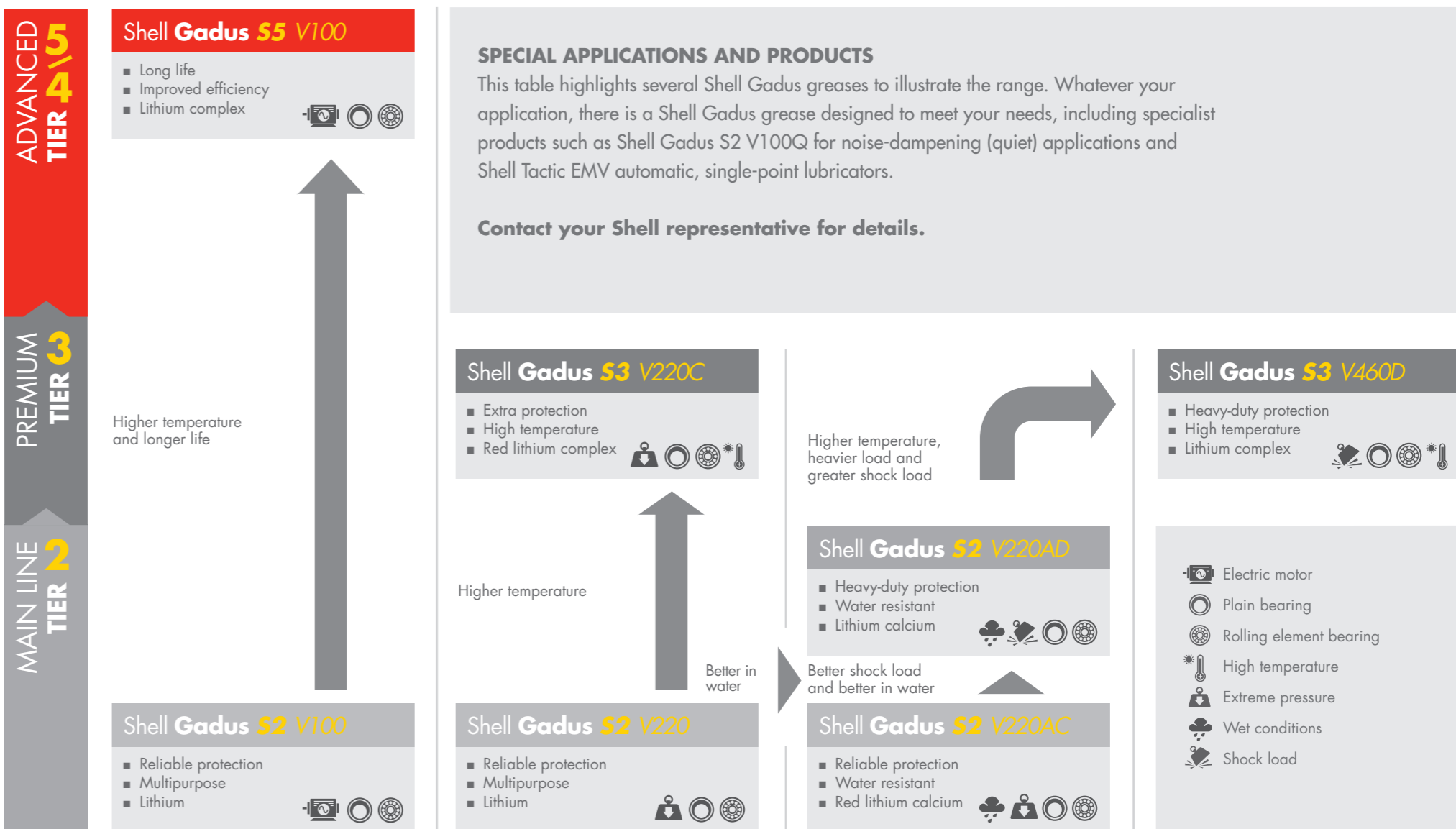
FIT-FOR-PURPOSE PROTECTION

Using the right grease for your needs can deliver significant savings. For example, a construction company reports saving \$3.8 million¹ 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

Multipurpose	Multipurpose Extreme Pressure (EP)	Heavy-duty Multipurpose
Bearings carrying low loads at higher speeds	Bearings carrying medium loads at medium speeds	Bearings 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
GREASE BASE OIL VISCOSITY 100	DRY ENVIRONMENTS 220 / WET ENVIRONMENTS	460

INCREASINGLY EFFICIENT PROTECTION



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.



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