



Formerly Known As: Whitmore® GearArmor™

# Shell Gadus (GearArmor)

## High-Performance Open Gear Lubricant

- Extreme Pressure
- Easy to Clean

Shell Gadus (GearArmor) is an open gear lubricant that provides improved protection, with unprecedented economy of use. Preventing wear on expensive components will always be the foremost “cost reduction” and Shell Gadus (GearArmor) is effective in this regard, even under the highest load.

### DESIGNED TO MEET CHALLENGES

#### Performance, Features & Benefits

##### Features

Shell Gadus (GearArmor) plates out on metal surfaces to create a dense dark film. The high concentration of solid lubricants provides a cushion of protection that minimizes metal-to-metal contact. Oil-soluble extreme pressure additives prevent scuffing by forming a slippery coating where surfaces come in contact. The combined effect greatly exceeds the protection offering by lubricants that rely primarily on high viscosity. Shell Gadus (GearArmor) promotes surface improvement as asperities are progressively smoothed down. The smoother surfaces minimize metal fatigue by spreading the load over a wider area. Reduced metal fatigue reduces the sub-surface cracking that leads to pitting.

Shell Gadus (GearArmor) is reinforced by the addition of polymers. These promote cohesiveness, metal adhesion and water resistance.

##### Benefits

- ECONOMY THROUGH WEAR PROTECTION – components last longer.
- ECONOMY OF USE – the cost of use per hour is competitive with lubricants based on asphalt and solvent.
- SAFETY – free of hazardous materials.
- CLEAN UP – no hard residue to remove.

#### Specifications, Approvals & Recommendations

For a full listing of equipment approvals and recommendations, please consult your local Shell & Whitmore Reliability Solutions Helpdesk.

#### Main Applications



Use Shell (GearArmor) on the open gears, house rollers and dipper sticks of mining machines. It is also suitable for protection of drum lagging and as a wire rope dressing. Shell Gadus (GearArmor) is sufficiently robust for use on the open gears of large ball mills, as well as kilns, calciners and rotary dryers.

## Typical Physical Characteristics

Properties			Method	Shell Gadus (GearArmor)
Worked Penetration - 60 strokes	@ 25°C		ASTM D217	320 – 345
Dropping Point		°F (°C)	ASTM D2265	360 (182)
Viscosity, Base Oil	@ 40°C	cSt	ASTM D445	3,268
	@ 100°C	cSt		98.5
Density	@ 60°F	lb/gal	Gardner Method	8.19
Specific Gravity	(15.5 °C)	g/cc		0.98
Four Ball EP, Weld Point		kg	ASTM D2596	800
Four Ball Wear, Scar Width		mm	ASTM D2266	0.65
Rust Test			ASTM D1743	Pass
Low Temperature Pumpability Lincoln Ventmeter	@ 400 psi	°F (°C)	OEM Standard	10 (-12)
Thickener				Lithium - Calcium

These characteristics are typical of current production. Whilst future production will conform to Shell & Whitmore Reliability Solutions specification, variations in these characteristics may occur.

## Health, Safety & Environment

### ■ Health and Safety

Shell Gadus (GearArmor) is unlikely to present any significant health or safety hazard when properly used in the recommended application and good standards of personal hygiene are maintained.

Avoid contact with skin. Use impervious gloves with used oil. After skin contact, wash immediately with soap and water.

Guidance on Health and Safety is available on the appropriate Safety Data Sheet, which can be obtained from <http://www.epc.shell.com/>

### ■ Protect the Environment

Take used oil to an authorized collection point. Do not discharge into drains, soil or water.

## Additional Information

### ■ Advice

Advice on applications not covered here may be obtained from your Shell & Whitmore Reliability Solutions representative.