

DRIVELINE

Axcel[®] S

Automotive Gear Oil Additive Package



Standard Tier, for Axles and Transmissions, with ZF and MAN Approvals

 **Afton[®]**
CHEMICAL
Passion for Solutions[®]

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Key Performance Benefits

Axcel[®] S additive is an automotive only gear oil additive that offers strong performance at a highly competitive treat-rate. Axcel[®] S additive provides:

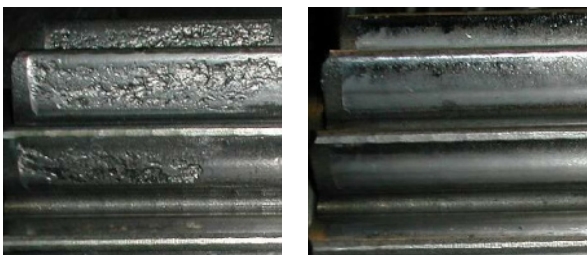
- Low treat-rate for GL-5, ZF and MAN performance
- MAN and ZF approval - MAN 342 M2 (160,000km), ZF TE-ML 12E (bus axles)
- Demonstrates excellent cleanliness due to its strong oxidative performance
- Unique 'booster' approach for MB, Scania, MTF and MIL-E approvals; Industrial and Top Tier performance

Axcel[®] A Family of Solutions

The Axcel[®] Family of core and additive boosters offers:

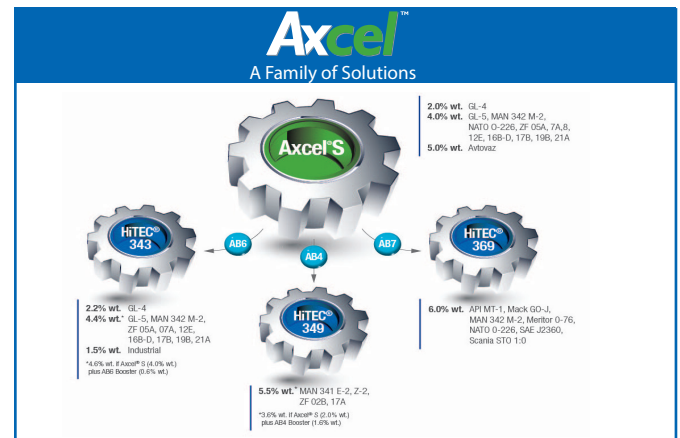
- Top treats to a range of applications at competitive treat-rates
- Reduced inventory control
- Improved plant utilisation
- Flexibility to meet peak demand
- Security and confidence from a product in a family of gear additives with an extensive history of trouble-free performance worldwide

Axcel[®] S provides superior protection against pitting and wear in ZF axle load test



Competitor

Axcel[®] S



Recommended Dosage

| Automotive | |
|------------|-------------------------------------------------------------------------------------------------------------------------------|
| 4.0% wt. | API GL-5 (eqv. MIL-L-2105D), MAN 342 M2 (160,000 km drain), ZF TE-ML 05A, 7A, 08, 12E, 16,B, C & D, 17B, 19B, 21A, NATO O-226 |
| 2.0% wt. | API GL-4 |

Treat-rates may vary depending on base stock.

Typical Characteristics

| | |
|---------------------------------------------------|---------------------|
| Appearance: | Clear Yellow Liquid |
| Density at 15°C, g/ml: | 1.098 |
| Flash Point (PMCC), °C: | 92 |
| Kinematic viscosity at 100°C, mm ² /s: | 8.4 cSt |

Handling Information

Max Handling Temp: 65°C
Shelf Life: 24 months at 25°C
6 months at 40°C

Approvals

| Product | Rear Axle Specifications | | | | | | | | | | | | | MT Specifications | | | | | | | | | |
|----------------------|--------------------------|------------|------------|------------|------------|-----------|----------------|--------------|--------------|-------------|--------------|----------------|--------------|-------------------|--------------|---------------|----------|----------|------------|------------|--------------|--------------|----|
| | API GL-5 | Industrial | MAN 342 M1 | MAN 342 M2 | NATO O-226 | SAE J2360 | Scania STO 1.0 | ZF TE-ML 05A | ZF TE-ML 07A | ZF TE-ML 08 | ZF TE-ML 12E | ZF TE-ML 168-D | ZF TE-ML 17B | ZF TE-ML 19B | ZF TE-ML 21A | Volvo 1273.10 | API GL-4 | API MT-1 | MAN 341 E2 | MAN 341 Z2 | ZF TE-ML 02B | ZF TE-ML 17A | |
| Axcel [®] S | 2 | 2* | 1 | 1 | 1* | 1* | 1 | 2 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2* | 1 | 1* | 1* | 1 | 1* |

Product Status

- Approved
- Meets Requirement
- Suitable for Use

Specification Status

- 1 Formal Approval
- 2 Self Certifying
- 3 Obsolete

Notes

- * Finished Fluid
- + Top treat required

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