



Alusynt® FGR

SYNTHETIC FOOD-GRADE OIL FOR GEARS AND GEARBOXES

Description

Alusynt® FGR is a high performance synthetic food-grade oil, designed for gears and gearboxes of the entire production chain of food&beverages, pharmaceutical and cosmetic market sectors.

The formulation of this product fulfills the non-toxicity requirements of H1 grade and it's recorded in the NSF White Book of Non-Food Compounds Listing Directory (please visit <https://info.nsf.org/USDA/Listings.asp?Company=N10201>).

Alusynt® FGR is formulated with selected additives, with excellent EP and anti-wear properties, to prevent efficiently micro-pitting and micro-scuffing phenomena, and it guarantees high lubrication even in severe mechanical stress conditions. High viscosity index and a low pour point guarantee to the product the right viscosity and a wide range of temperature usage for easier cold-starts. Furthermore, base oils and additives ensure a long life in service, delivering significant maintenance costs reduction.

Features

- ✓ **High anti-wear, anti-rust and anti-corrosion power**, to minimize friction and to ensure protection to metal surfaces of all equipment, in order to prevent micro-pitting and scuffing phenomena.
- ✓ **Excellent EP properties**, to guarantee optimum lubrication also in presence of high loads.
- ✓ **High oxidation resistance and thermal stability**, to ensure long life in service and to prevent residues formation.
- ✓ **High viscosity index**, for service efficiency in wide range of temperatures.
- ✓ **Very low pour point**, to assure appropriate service even in case of cold-starts.
- ✓ **No foam and no air retention**, for a good functioning of all moving parts.
- ✓ **Very good demulsibility**, which means quick oil/water separation, which avoids the formation of stable emulsion, main cause of oil degradation.
- ✓ **No carbon based deposit** for high level of cleanliness of all mechanical parts even in high working temperatures.

Main uses

Alusynt® FGR is designed to operate:

- Loaded gearboxes, gearboxes with straight, helical, spiral, cylindrical or bevel gears and planetary gears
- Oil bath bearings
- Chains working at high temperature
- Low pressure compressors ISO 150 – 220 grades.

Specifications

DIN 51517 – 3 (CLP)

The data in this TDS are based on our general knowledge and experience. Aluchem is not responsible for their use. The final user is free to make his own tests and analysis. Aluchem reserves the right to update this document every time is needed.





Technical Data

	Method	Units	Typical Values					
			150	220	320	460	680	1000
ISO Viscosity grade	ASTM D 2422	-	150	220	320	460	680	1000
Density at 20°C	ASTM D 1298	g/cm ³	0,850	0,855	0,855	0,860	0,860	0,865
Viscosity at 40°C	ASTM D 445	mm ² /s	154,5	223,6	326,2	451,8	696,8	1032
Viscosity at 100°C	ASTM D 445	mm ² /s	19,03	25,32	33,82	45,33	60,84	80,31
Viscosity Index	ASTM D 2270	-	140	144	146	156	154	155
Pour Point	ASTM D 97	°C	- 42	- 39	- 36	- 33	- 27	- 21
Flash Point (C.O.C)	ASTM D 92	°C	> 250	> 250	> 250	> 250	> 260	> 280
Foaming sequence I,II,III	ASTM D 892	ml/ml	0/0	0/0	0/0	0/0	0/0	0/0
FZG Fail Stage	DIN 51354	-	Exceed 12° stage					
Copper Corrosion	ASTM D 130	-	1a					
Welding Load – 4 Ball Test	ASTM D 2783	Kg	200					

- **Alusynt® FGR** suggested thermal range usage :
 - ISO 150 and 220 : -30 ÷ 160 °C
 - ISO 320 and 460 : -25 ÷ 180 °C
 - ISO 680 and 1000 : -15 ÷ 200 °C

- **Alusynt® FGR** is compatible with mineral and synthetic lubricants, except those based on polyalkylene glycol (PAG).
- **Alusynt® FGR** is compatible with the most common types of seals and paints used in gears and gearboxes.
- Store the product in its closed original container in a protected area and not exposed to sunlight and rain.
- **Aluchem** owns the following certifications: UNI EN ISO 9001:2015, KOSHER, HALAL.

Product tiering: Top

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