TECHNICAL DATA SHEET

SUPEOX CL 1400P

During the production of low-density polyethylene (LDPE), the ethylene gas feedstock is compressed at pressures up to 3500 bar, and the final compression stage is carried out in high speed reciprocating compressors known as hyper compressors. Polyalkylene glycols (PAGs) are most cost effective with best lubrication performance. SUPEOX CL 1400P provides outstanding performance and economy.

Physical Property:

Property	Test Method	Typical Value
Viscosity @ 40°C, cSt	ASTM D445	268
Viscosity @ 100°C, cSt	ASTM D445	47
Viscosity Index	ASTM D2270	237
Density @ 20°C,kg/m³	ASTM D1298	1088
Flash point, COC, °C	ASTM D92	250
Pour point, COC, °C	ASTM D97	-13
Moisture,%	ASTM E203	Max 0.2

Applications:

PAGs are much less soluble in the ethylene than other oils, like white oil and polyisobutylene (PIB), therefore, the two advantages are observed in the LDPE hyper compressions:

★Minimizing viscosity reduction due to ethylene dissolving in the lubricant.

★Lubricant is much less to be removed or washed from the plunger running zone.

Thus, the overall lubricant consumption and compressor maintenance requirement (due to wear issues) are reduced. The consumption of PAGs is usually less than half the corresponding consumption of white oil or polyisobutylene in the same conditions.

SUPEOX CL 1400P is a well formulated product with special PAGs and additives to address the potential problems in the LDPE compression:

●**SUPEOX CL 1400P** proves to be the most effective at reducing prepolymer formation and is also recommended for use under conditions where co-polymers of ethylene with other monomers are being manufactured, for example, vinyl acetate monomer.

●**SUPEOX CL 1400P** is recommended for co-polymers of ethylene and vinyl acetate (VAM) containing up to 15% vinyl acetate.

● In the polymerization of ethylene where conditions result in some prepolymerisation of the ethylene in the hyper-compressor or heat exchanger, **SUPEOX CL 1400P** offers performance advantages, including:

√ Reduced down time for maintenance

√ Reduced loss of the feedstock due to polymerization

√ Less pre-polymer deposits and improved efficiency

SUPEOX CL 1400P is a stable, non-corrosive, high flashpoint liquid which can be stored in mild steel tanks under air or nitrogen. However, it can absorb moisture so appropriate measures to avoid this should be taken.