

Warning values for used RENISO refrigeration oils (acc. to DIN 51503-2, 2015)

Brand name	Group	Deviation in kinematic viscosity at +40 °C [mm ² /s]*	Max. Water content [mg H ₂ O/kg oil]	Neutralization number [mg KOH/g]
		DIN EN ISO 3104	DIN 51777-1 DIN 51777-2	DIN 51558-1
RENISO K Mineral oils	KAA KC KE	** ± 15% of fresh oil value ± 15% of fresh oil value	100 60 80	– 0,07 0,1
RENISO SYNTH Polyalphaolefins (PAO)	KAA KB KE	** ± 15% of fresh oil value ± 15% of fresh oil value	100 80 80	– 0,1 0,1
RENISO S/SP Alkyl benzenes (AB)	KAA KC KE	** ± 15% of fresh oil value ± 15% of fresh oil value	100 60 80	– 0,07 0,1
RENISO PAG/ACC RENISO PG/GL Polyalkylene glycols (PAG)	KAB KB KD KE	** ± 15% of fresh oil value ± 15% of fresh oil value ± 15% of fresh oil value	500 800 800 800	– 0,2 0,2 0,2
RENISO TRITON SE/SEZ RENISO C Ester oils (POE, complex esters)	KB KC KD KE	± 15% of fresh oil value ± 15% of fresh oil value ± 15% of fresh oil value ± 15% of fresh oil value	150 150 200 200	0,2 0,1 0,2 0,2

* In the case of kinematic viscosity manufacturer's specifications should always be observed.

** Larger deviations from fresh oil values are possible in the case of ammonia refrigeration oils – acceptable in the direction of a higher viscosity.

The lubricant / compressor / installation manufacturer should be consulted if the warning values are exceeded.

- KAA – Ammonia refrigeration oils (not miscible: e.g. mineral oils, alkyl benzenes, polyalphaolefins)
- KAB – Ammonia refrigeration oils (miscible: e.g. polyalkylene glycols)
- KB – CO₂ refrigeration oils (CO₂ miscible: e.g. polyol esters, polyalkylene glycols, CO₂ non-miscible: e.g. polyalphaolefins)
- KC – HCFC refrigeration oils (e.g. mineral oils, alkyl benzenes, complex and polyol esters)
- KD – HFC/FC refrigeration oils (e.g. polyol esters, polyalkylene glycols)
- KE – Hydrocarbon refrigeration oils (e.g. mineral oils, alkyl benzenes, polyalphaolefins, polyalkylene glycols, polyol esters)

Determining water content according to Karl Fischer

DIN 51777-1 (direct):
for refrigeration oils without additives

DIN 51777-2 (indirect):
for refrigeration oils with and without additives