

## Rodutherm® W-KFA

**Heat Transfer Fluid**  
**Based on organic salts**  
**-60 °C to 60 °C**

### Application

**Rodutherm® W-KFA** has been developed specifically for indirect cooling systems and heat pumps and it is used in a temperature range from -60 °C to 60 °C.

Due to its optimised viscosity, **Rodutherm® W-KFA** is especially well suited for low temperature applications. Its specific heat capacity is significantly higher than that of other organic media. All this characteristic lead to good heat transfer characteristics and a good pumpability at low temperatures.

Applications range from heat pump systems over cooling and heating systems for industrial processes to coolants in indirect cooling systems for artificial skiing or ice skating rinks.

**Rodutherm® W-KFA** is available as a concentrate.

The degree of dilution depends on the system requirements and is mainly regulated by the desired frost protection temperature.

### Quality

**Rodutherm® W-KFA** is an additivated heat transfer fluid based on potassium formate. The inhibitors are based on a hybrid OAT. Apart from established organic additives, other mineral salts are used, that increase corrosion protection. This means that optimum protection is provided over the entire temperature range.

**Rodutherm® W-KFA** is not toxic and quickly degrades biologically.

The corrosion protection performance is documented by standardised and specialised corrosion tests as per ASTM D1384.

### Compatibility and miscibility

With a few exceptions, **Rodutherm® W-KFA** is compatible with most comparable heat transfer fluids, but for corrosion protection reasons, we recommend using it without any admixture. In case of admixture, we cannot make any definitive statements about corrosion resistance, as we do not know the third party product.

We do not recommend using **Rodutherm® W-KFA** in installations that contain aluminium, zinc or zinc plated steel.

### Handling and storage

**Rodutherm® W-KFA** should be stored at room temperature. The storage temperature should not exceed 35 °C over long periods.

**Rodutherm® W-KFA** can be stored in unopened containers for at least one year without any impact on product quality.

It is recommended to decant the material only into new containers and not into used ones.

### Packaging

**Rodutherm® W-KFA** is available as standard in IBC-containers.

### Note

When handling the product, the safety data sheet must be observed.

Please contact us if you require further information or general technical advice.

# Product information

## Rodutherm® W-KFA

### Technical data

Rodutherm® W-KFA	[% by weight]	50
pH	[-]	9.5
colour		light blue

### Freeze point and boiling point (ready mix)

Rodutherm® W-KFA	[% by weight]	50
Freeze point	[°C]	-60
Boiling point	[°C]	114

### Physical characteristics (ready mix)

Rodutherm® W-KFA	[% by weight]	50
Density @ -10 °C	[g/ml]	1.356
Density @ 20 °C	[g/ml]	1.34
Density @ 100 °C	[g/ml]	1.308
Viscosity @ -10 °C	[mm <sup>2</sup> /s]	4.80
Viscosity @ 20 °C	[mm <sup>2</sup> /s]	2.09
Viscosity @ 100 °C	[mm <sup>2</sup> /s]	0.32
Heat capacity @ -10 °C	[kJ/kgK]	2.60
Heat capacity @ 20 °C	[kJ/kgK]	2.71
Heat capacity @ 100 °C	[kJ/kgK]	2.96

### Corrosion protection performance

Testing method <b>ASTM D1384</b>	Change of weight [mg]/period <sup>1</sup>					
	brass	copper	solder	steel	cast iron	aluminium
Comparable product <sup>2</sup> -40 °C	-8.4	-7.2	-82.3	-2.0	-347.9	-23.3
Rodutherm® W-KFA -60 °C	2.0	2.5	112.0	-0.5	306.0	1.0

<sup>1</sup> loose of weight after chemical treatment.

<sup>2</sup> The comparable product is also based on potassium formate.