floixem@floixem.com
www.floixem.com
Tel: +34 634 119 130

FLOIXEM® N20

Monoethylene glycol base antifreeze
Protection temperature -20°C
Biodegradable.

Description et applications:

Monoethylene glicol based antifreeze with protection temperatures down to -20°C for applications that do not come into contact with food materials. Biodegradable.

100% organic formulation (OAT) to guarantee the best protection for all types of metal and compatible with the plastics and elastomers normally present in circuits. Aluminium and its alloys are protected from corrosion.

Additives are not consumed during use, so there's no need to replenish with extra packs or check for residual additives regulary.

Free from hazardous additives such as nitrites, amines, nitrates, borates, benzoates, 2EH.

Technical Data:

Appearance	Transparent Liquid
Colour	Fluorescent yellow
pH at 20°C	8.0-9.0
Monoethylene glycol % by weight	33%
Protection Temperature	-20°C

Data has been gathered in specific bibliography and proprietary test. It is not part necessarily of the technical data.

Protection against corrosion:

Results according with standard ASTM D1384.

Metal	Floixem® N20	Limit
Copper	1.9	10
Soft Solder	0.3	30
Brass	0.1	10
Carbon Steel	0.2	10
Cast Iron	-0.7	10
Aluminium	6,3	30

Results in mg per coupon after 336 hours at 88°C with forced aeration and corrosive water. Negative results indicate a weight gain in the control due to the formation of a stable protective layer.

Mode of use:

Floixem® N20 is ready to use, do not dilute with water or mix with other products.
In new installations, flushing with water is recommended to remove particles, grease and flux residues (especially if they contain borax, chlorides or fluorides).
It is advisable to purge the circuit to avoid air pockets.
Use Teflon tape or hemp to seal threaded joints. Check the compatibility of other products with monoethylene before use.
Mono ethylene glycol and its dilutions are not compatible with zinc as it dissolves it. If galvanized pipes are present in the system, a whitish solid will appear at the start of the operation. Once the carbon steel has been removed, it will be protected by Floixem® N20 and no further precautions are necessary.

Temperatures of Use:

Recommended range for closed circuits is -20°C to 180°C.

Prolonged periods at temperatures above 180°C may reduce the useful life of the product due to degradation of the monoethylene glycol.

In open circuits or where there is an oxygen inlet (valves, automatic filling, etc.) the maximum temperature is lower. If in doubt, consult the technical department.

Precautions :

Harmful if swallowed.
Handle in accordance with good chemical practice. In case of doubt, consult the safety data sheet.
No transport or storage restrictions.
Keep in original tightly closed containers out of direct sunlight.

Homologations:

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Presentation

		
5 Kg.	4	128
10 Kg.	-	60
20 Kg.	-	36
230 Kg.	-	2
1000 Kg	-	1

Physical-chemical properties

Temperature	Density	Heat Capacity	Thermal conductivity	Dynamic viscosity	Kinematic viscosity	Prandtl number	Thermal coefficient
°C	ρ (Kg/m^3)	Cp (KJ/KgK)	λ (W/mK)	μ (mPas)	υ (mm^2/s)		β (*10^{-5} 1/K)
-20	1.060,21	3,704	0,468	9,87	9,31	77,13	18,21
-10	1.057,63	3,713	0,477	6,05	5,72	46,74	26,76
0	1.054,75	3,726	0,485	3,98	3,77	30,42	33,42
10	1.051,56	3,742	0,493	2,77	2,63	21,03	38,58
20	1.048,04	3,760	0,499	2,03	1,93	15,31	42,55
30	1.044,17	3,780	0,504	1,55	1,48	11,64	45,58
40	1.039,93	3,801	0,509	1,22	1,18	9,18	47,87
50	1.035,32	3,822	0,513	1,00	0,96	7,48	49,55
60	1.030,30	3,845	0,517	0,84	0,81	6,27	50,76
70	1.024,87	3,867	0,520	0,72	0,70	5,38	51,58
80	1.019,02	3,890	0,523	0,63	0,62	4,71	52,11
90	1.012,71	3,913	0,525	0,56	0,55	4,20	52,40
100	1.005,94	3,936	0,527	0,51	0,50	3,81	52,50