

Antifreeze additive G11

Inorganic Additive Package

Superconcentrate S2230 is a water based, highly concentrated additive package designed to prepare a high-quality engine coolant concentrate by the addition of monoethylene glycol. The additive package is based on long proven technology to produce a high-performance finished antifreeze which is NAP (nitrite, amine, phosphate) free. Carefully chosen additives give it the following properties when let down into a finished product:

1. Thermal characteristics that permit effective engine cooling without boiling.
2. Sophisticated stabilization package to prevent fouling of systems caused by the use of hard water.
3. Improved anticorrosion protection of all metals and alloys used in the cooling system of modern vehicles.
4. Protection against frost, depending on the concentration chosen.
5. Compatibility with rubber and plastics used in the cooling system.
6. Meets most European and International Standards.

Typical Properties S2230

Appearance	Slightly hazy liquid	Visual
Colour	Colourless to pale yellow	Visual
Density at 20 °C	1.39 g/cm ³	ASTM D 4052

For further information please see the C2230 technical Data Sheet which outlines the technical data obtained on the final product when the blending instructions are followed.

These are typical properties and do not constitute a specification. For specification limits please refer to the sales specification.

Packages

Superconcentrate S2230 is available in bulk, drums and IBC's.

Blending Instructions

<i>Components:</i>	<i>Monoethylene Glycol</i>	<i>(94 % wt)</i>
	<i>Superconcentrate S2230</i>	<i>(5 % wt)</i>
	<i>Demineralised Water</i>	<i>(1 % wt)</i>

Tank and Mixing Requirements:

A clean HDPE, carbon-steel or stainless-steel mixing vessel with a suitable mixing system (static or propeller) is required, preferably with over the top circulation. It is critical to ensure that the whole tank of MEG and Super-Concentrate is sufficiently agitated so that there are no blind spots within the tank. The addition system for the Super-Concentrate S2230 should allow a slow and gradual addition into the MEG, with proper metering device. At all times, it must be avoided that MEG or mixed antifreeze returns into the S2230 transfer line or storage vessel. The mixing vessel should have an adequate sampling point.

Prior to Blending:

First always charge the required quantity of MEG into the mixing tank followed by the demineralised water. The S2230 addition line should be clean, flushed and primed before blending commences. It is recommended to periodically check the accuracy of the metering device by filling S2230 into a measuring cylinder/can. Switch on the mixing device(s) to properly agitate the mixture. When the MEG and Water is fully mixed the addition of S2230 can start.

Blending:

At all times, the dosage of Superconcentrate S2230 in MEG should remain lower than 5%, also in circulation lines or at the addition point. A higher concentration due to ineffective dispersion of S2230 into the MEG can lead to excessive Silicate levels in MEG with the possible formation of irreversible Silica gel. The introduction of S2230 into MEG should happen very slowly until a total dosage of 5% is reached. Intermediate samples can be taken and analysed to monitor progress and homogeneity. When all S2230 is added keep mixing on until a homogeneous solution is achieved. If required add dye or antifoam through the top hatch and mix thoroughly. The time taken to achieve homogeneity will depend on the size of the vessel and the mixing efficiency. During the initial blends, it is recommended to take multiple samples (if possible, at bottom, middle and top of tank) to determine the required mixing time after final addition of S2230.

Final analysis:

When the blend is homogeneous a final sample should be taken for inspection. The expected results are within the following limits:

Test	Result
Reserve Alkalinity	20 - 25ml
pH (33% vol)	8.5 - 9.5
Density	1.120 - 1.126
Water Content	4-5 %
Appearance	Clear and Bright

We strongly advise to contact Solventis to review available equipment for suitability.

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Storage and Handling

Superconcentrate S2230 has a shelf life of at minimum two years when stored in air-tight containers at a maximum temperature of 30°C. Translucent containers should not be stored outside in direct sunlight, especially in warm climates. S2230 can be stored HDPE containers.

The use of galvanized steel is not recommended for pipes or any other part of the storage/mixing installation.

As Superconcentrate S2230 is a highly concentrated aqueous solution, it is of the utmost importance that it is protected from extremes of cold weather and not allowed to drop below 0°C. Failure to protect from cold weather may affect the quality of the finished product. If it is not possible to protect S2230 from cold weather and subsequently dissolved solids drop out of solution, do not try to incorporate these sediments into the glycol blend.

Disposal of used or unused product must be carried out in accordance with local and national law, consult the material safety data sheet for further details.

Toxicity and Safety

As with all chemical products, awareness and control of any potential hazards is of high importance. Please consult the material safety data sheet which is available detailing the hazards associated with this product.

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