

Product Information

Cetamine[®] V217

All-organic corrosion inhibitor for steam boilers - FDA conform

Principal Applications:

Cetamine[®] V217 is an all-organic product to prevent corrosion in steam boilers by formation of a protective film on metal surfaces. Due to its distribution ratio between gas and liquid phase, Cetamine[®] V217 also protects steam and condensate lines.

Cetamine[®] V217 prevents scale formation in boilers by stabilizing and dispersing hardness and deposits.

Cetamine[®] V217 can be used in steam boilers even when there is feedwater injection in steam (for steam temperature adjustment purposes). Cetamine[®] V217 can be used for steam boilers fed with softened, demineralized or R.O. water.

Cetamine[®] V217 is intended to protect boilers during the production of steam used in processing and heating food. It complies with the Food, Drug and Cosmetic Act and all applicable food additive regulations, including applications described in FDA 21 C.F.R. Section 173.310 ('Boiler water additives')

General Description:

Cetamine[®] V217 is a liquid product, based on film-forming amines and neutralizing amines.

Appearance:

yellowish liquid

Density (20°C/68°F):

0.98 ± 0.03 g/cm³

pH (1 % Solution):

12.0 ± 0.5

Freezing point:

-15 ± 1 °C

Solubility in Water:

A dilution of the product is not recommended.

Effect on Environment:

For information please see material safety data sheet.

Mode of Action:

The corrosion inhibition of Cetamine[®] V217 is based on the following mechanisms:

1. Formation of a protective film by adsorption of the filming amine on the surface by its nitrogen atoms.
2. Neutralization of carbon dioxide in steam and condensate.
3. pH adjustment of the feedwater and condensate in order to maintain carbon steel and copper in their passive state according to Pourbaix's program.

The stabilizing and dispersing effect of Cetamine[®] V217 prevents the formation of scale by blocking crystal growth (Threshold effect). Beyond the stabilization limit, an amorphous precipitate is obtained which can be dispersed and does not form an adherent scale. It can be removed from the boiler by normal bottom blow-down.

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Dosage:

The dosage to be applied depends on a number of factors, e.g. concentration ratio, hardness, total alkalinity, chloride content, temperature, holding time index and suspended solids and should be selected with the help of a BKG-representative.

The general dosage of Cetamine® V217 is in the range of 15 to 100 g/m³ of make-up water.

The dosage should be adjusted until a pH in the condensate higher than 8.2 is reached.

Application:

Cetamine® V217 should be added into the feedtank or the feedwater pipe.

The product should be injected by means of an automatic dosing system regulated by the volume of make-up water.

Cetamine® V217 should be dosed pure, without dilution in a dosing tank.

All parts of the feeding equipment coming in contact with the product must be made of PVC (suction tubing), teflon (membranes), EPDM or teflon (seals) and Polyethylene (discharging tubing).

The product is not compatible with Viton.

Cetamine® V217 is intended for industrial use only.

Storage:

Cetamine® V217 should be kept at room temperature, in tightly closed containers.

Analysis:

The Cetamine® V217 content can be determined from the polyamine concentration in the condensate return and in the feedwater, by a titration method (Heyl) or a photometric method. (method A 17E-Amin I or A 18E-Amin II)

The sufficient dosage of Cetamine® V217 can also be checked by condensate pH measurement: in this case the pH should be at least 8.2.

Handling Precautions:

For information please see material safety data sheet.

The expiry date of the product is given on the packaging labels.

Cetamine® V217 is intended to protect boilers during the production of steam used in processing and heating food. It has been evaluated by an independent, third-party law firm having the expertise in evaluating food contact substances, that if used in the manner intended - except for use in contact with milk and milk products -, Cetamine® V 217 fully complies with the Food, Drug and Cosmetic Act and all applicable food additive regulations, including applications described in FDA 21 C.F.R. Section 173.310 ('Boiler water additives'), provided that no more than 142 mg of Cetamine® V 217 is added per kg of feed water.

The information contained herein reflects our current level of technical knowledge and experience. It does not constitute a legal warranty of particular characteristics or of fitness for a specific purpose and, due to the abundance of possible influences, does not exempt the user from making its own examinations and taking appropriate precautionary measures. It shall be the responsibility of the recipient of our products to respect any intellectual property rights and comply with any laws or other provisions.

BKG Water Solutions

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