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Corrosion Inhibitor Detergents / Degreasers / Temporary Protection

FUNCTION

Ready-to-use, liquid-form and organic **corrosion inhibitor**, for **ferrous** and **non-ferrous** metals in contact with **neutral-to-alkaline** aqueous solutions.

Anticorrosion agent for a **temporary protection** of metals against **atmospheric corrosion**.

APPLICATION

Mainly used for :

- **Neutral or alkaline detergents** in contact with metal substrates ;
- Metal **degreasing** and **cleansing** operations performed during metal-working procedures ;
- The **temporary protection** of metals during their transport and storage periods ;

FEATURES

- Fully **water-soluble** liquid
- **Non-flammable**
- **VOC-free**
- **Free from bore, phosphate, molybdate, silicate or nitrite**
- Efficiently protects **copper and alloys**
- Efficiently protects **aluminium and alloys** in contact with alkaline solutions
- Made exclusively of substances authorized for **food-contact cleaners***

INCORPORATION / DOSAGE

Can be **directly added to the solution** to be treated, without any pre-mixture or neutralizing step.

Indicative use dosages (% of total end-solution weight)

- Detergents/Degreasers : **1 to 2%**, depending on the pH.
- Temporary protection : **4 to 10%** depending on the expected protection duration.

When used for **temporary protection only**, the product should be diluted in soft water and applied onto metal substrates :

- by dipping ;
- by spraying (depending on the spray pressure, a defoamer can be recommended) ;
- or by brushing.

PROPERTIES

Chemical nature :

Aqueous preparation made of organic acid salts and azole derivatives.

Appearance : yellow to amber limpid liquid.

Density (20°C) : 1,14 ± 0,02

pH pure (20°C) : 8,5 ± 0,3

Viscosity (20°C) : 780 ± 100 cps

Freezing point : < -5°C

Miscibility :

| | |
|----------------|--------------|
| Water : | miscible |
| Ethanol : | miscible |
| Isopropanol : | miscible |
| Glycols : | miscible |
| Acetone : | miscible |
| White-Spirit : | non miscible |

PACKAGING

Plastic pail of **30kg** net.

Metal drum of **200kg** net.

IBC of **1000 kg** net.

STORAGE

Ideal **temperature conditions** : -5 to 30°C.

Exposure : avoid direct exposure to sunlight.

Expiration : 2 years in its original sealed drum, in the storage conditions described above.

With time, the colour of the product may turn darker, but it does not modify its properties.

TRANSPORT

No specific condition for transport.

Weight and packaging size** (off-pallet) :

Pail : 1,5kg - Ø30, H50

Drum : 15kg - Ø60, H90

IBC : 70kg - L120, l100, H120

HANDLING / SECURITY

Refer to updated Material and Safety Data Sheet.

*: according to decree of 08/09/99

** : non-contractual data

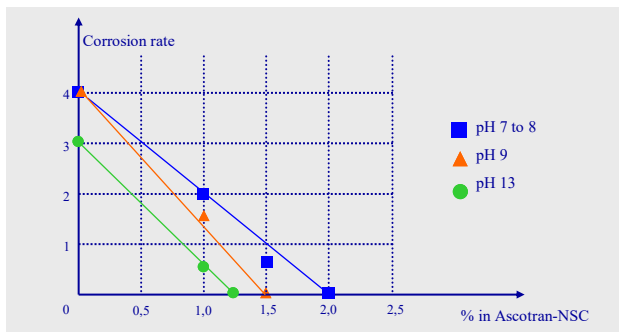
Note : The data contained in this publication are based on our current knowledge and experience. In view of the many factors that may affect processing and application of our product, these data do not relieve processors from carrying out their own investigations and tests ; neither do these data imply any guarantee of certain properties, nor the suitability of the product for a specific purpose. Any descriptions, drawings, photographs, data, proportions, weights, etc. given herein may change without prior information and do not constitute the agreed contractual quality of the product. It is the responsibility of the recipient of our products to ensure that any proprietary rights and existing laws and legislation are observed.

PERFORMANCE

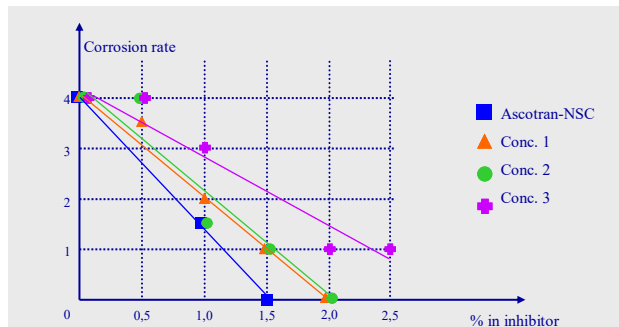
Protection by contact or short immersion

Method : DIN 51360/part 2
Medium : deionized water

Performance at different pH (adjustment with NaOH) :

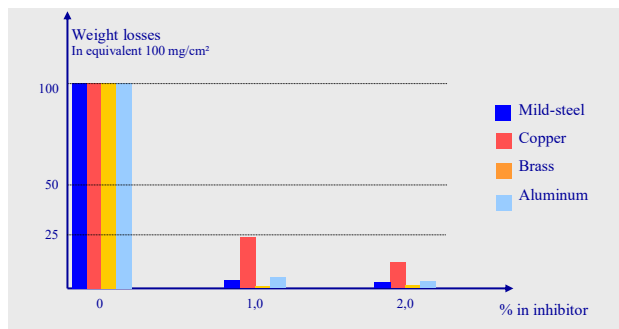


Comparative studies with our competitors' inhibitors :
Medium : deionized water adjusted at pH=9 with NaOH if necessary.
Competitor 1 & 2 : multi-metallic liquid corrosion inhibitors.
Competitor 3 :azole-based corrosion inhibitor.



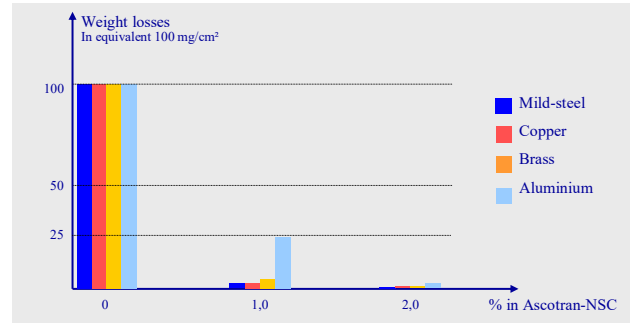
Multi-metallic protection

Method : IP329; 50°C, 330h
Medium : deionized water adjusted at pH=9 with NaOH if necessary.



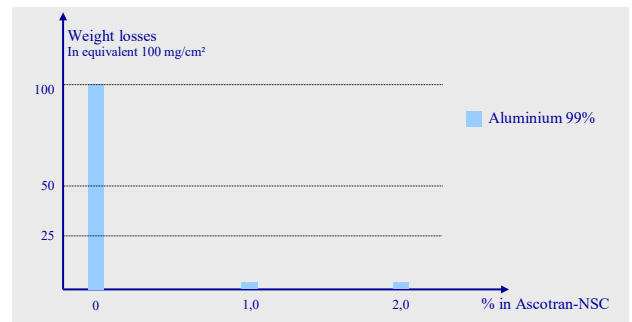
Galvanic protection

Method : ASTM D1384
Medium : corrosive water / EG mixture (see standard).



Aluminium protection in basic medium

Method : IP329; 50°C, 330h
Medium : deionized water adjusted at pH=12-13 with NaOH.



Cuprous metals protection

Method : ASTM D130, 3h, 100°C
Medium : hydrosoluble oil, ready-to-use.

Comparative study with azoles :

BZT : pure benzotriazole ; TT : pure tolyltriazole

| | 0 | 50 ppm | 100 ppm |
|--------------|----|--------|---------|
| Ascotran-NSC | 3b | 1a | 1a |
| BZT | 3b | 1b | 1a |
| TT | 3b | 1b | 1a |

Protection against atmospheric corrosion

Method : climatic chamber, 25°C, 100% of humidity
Substrate : Mild-Steel or Copper 99%, immersed a few minutes in the solution added with inhibitor.

Maximum exposure duration without any corrosion of the substrate :

| % in Ascotran-NSC | 0 % | 2% | 5% | 10% |
|-------------------|------|--------|--------|--------|
| Copper | <24h | >1000h | >1500h | >3000h |
| Mild-Steel | <24h | 350h | 500h | >500h |