



VpCI® FORMULATED PRODUCTS FOR PROCESS INDUSTRIES

VpCI®-637/637 GL



PRODUCT DESCRIPTION

VpCI-637/637 GL provides effective internal corrosion control in natural gas and crude oil gatherings and transmission lines.

VpCI-637/637 GL are a combination of vapor phase, neutralizing, and film-forming corrosion inhibitors to combat the broadest range of corrosive attack from moisture and condensation, oxygen, carbon dioxide, hydrogen sulfide, and other corrosive contaminants in natural gas and petroleum. These non-emulsifying formulations offer the benefits of filming inhibitors that form a tenacious protective film on metal surfaces; neutralizing inhibitors that combat corrosive fluid formation and vapor phase inhibitors that reach areas inaccessible by direct contact to protect areas subject to varying flow ratios.

The unique chemistries of VpCI-637/637 GL allow these products to provide excellent protection in "sweet/sour" saturated carbon dioxide/hydrogen sulfide environments.

According to results obtained from the Wheel Test (NACE test method publication ID182), VpCI-637/637 GL provides excellent protection in both continuous and intermittent treatments; due to exceptional film persistency.

FEATURES

- Effective for a wide range of systems and corrosive conditions
- Provides maximum control over long distances for highly corrosive systems having a high ratio of water-to-hydrocarbons, including low areas in systems where water collects and extreme corrosive attack occurs

- Form an adsorbed, protective layer that protects ferrous and non-ferrous metals
- Effective against water, corrosive gases, and halogens
- Vapor phase action provides protection from atmospheric conditions and moisture condensation to areas not accessible by filming inhibitors
- Recommended concentrations do not cause foaming or upsets in gas sweetening or glycol dehydration processes
- Does not contain heavy metals, chlorinated hydrocarbons, or volatile amines
- Provides cost effective solution
- VpCI-637 GL does not affect foaming properties in the natural gas processing

TYPICAL APPLICATIONS

VpCI-637/637 GL are designed for use in natural gas and petroleum recovery process and crude oil when water solubility is desired.

VpCI-637 GL is recommended for systems where low foaming properties are required.

VpCI-637 is very effective in gathering systems containing a significant amount of water or as a corrosion inhibitor for secondary oil-recovery operations, where the water is a carrier.

PERFORMANCE

	Z**, Protection
Wheel Test	
Film persistency, 500-1000 ppm	90+
Continuous Treatment, 15-25 ppm	90+
Rotating Cylinder Electrode***	
20-50 ppm	95+

* Test performed by Dixie Testing and Products, Inc. Corrosion Wheel test in 90% NACE recommended electrolyte (-NaCl - 73,300 ppm, CaCl₂ - 7,534 ppm, MgCl₂ - 1,000 ppm) + 10% Depolarized Kerosene containing 500ppm H₂S saturated with CO₂ at 150°F (65°C).

** Z = 100% (CR_c-CR_i)/CR_c, where CR_c - corrosion rate in electrolyte without inhibitor, CR_i - corrosion rate in electrolyte with inhibitor



*** Data for VpCI-637. Test was performed in accordance to ASTM G 170-01, a Standard Guide for Evaluating and Qualifying Oilfield and Refinery Corrosion Inhibitors in the Laboratory.

Methyldiethanolamine Foaming Test*

Chemical Added	Chemical Concentration (ppm)	Foam height (ml)
None	0	80
VpCI-637 GL	250	80
VpCI-637 GL	500	40

* Test performed by Dixie Testing and Products, Inc.

METHOD OF APPLICATION

VpCI-637 GL is best applied by continuous injection or atomization into the transmission line at a rate of 10-30 fl. oz. (300-900 ml) of product per million cubic feet of gas. Atomization of the product neat into the gas stream enhances dispersion and length of travel. The effective distance expected through atomization varies with gas volumes and degree of dryness (quantity of water condensed inside pipeline), however the distance will usually range between 20 and 40 miles (32 to 64 kilometers).

VpCI-637/637GL can be applied at the 15-50 ppm concentration ranges in gathering systems and pipelines of crude oil systems, "as is" or be prediluted with a carrier.

FOR INDUSTRIAL USE ONLY

KEEP OUT OF REACH OF CHILDREN

KEEP CONTAINER TIGHTLY CLOSED

NOT FOR INTERNAL CONSUMPTION

CONSULT SAFETY DATA SHEET FOR MORE

INFORMATION

LIMITED WARRANTY

All statements, technical information and recommendations contained herein are based on tests Cortec Corporation believes to be reliable, but the accuracy or completeness thereof is not guaranteed.

Cortec Corporation warrants Cortec® products will be free from defects when shipped to customer. Cortec Corporation's obligation under this warranty shall be limited to replacement of product that proves to be defective. To obtain replacement product under this warranty, the customer must notify Cortec Corporation of the claimed defect within six months after shipment of product to customer. All freight charges for replacement products shall be paid by customer.

Cortec Corporation shall have no liability for any injury, loss or damage arising out of the use of or the inability to use the products.

Application Examples

Type of System to be Protected	Product to Use	Technology of Application
Natural Gas Wells and Gas Transmissions Pipelines	VpCI-637 GL	Continuous injection of 300-900 ml per million cubic feet of gas
Gathering Systems containing CO ₂ , H ₂ S, and highly electrolyte encroached	VpCI-637	Periodic injection of 700-2500 ppm every 1-1.5 months
Crude Oil/Brines for secondary recovery	VpCI-637/637GL	Continuous injection 15-50 ppm

TYPICAL PROPERTIES

	VpCI-637	VpCI-637 GL
Appearance	Dark green/brown-liquid	Amber to green/brown liquid
Non-Volatile Content	27-31%	32-39%
pH	9.4-10.4 (neat)	7-8.2 (1% water)
Density	8.0-8.3 lb/gal (0.96-0.99 kg/l)	8.1-8.3 lb/gal (0.97-0.99 kg/l)
Pour Point	14°F (-10°C)	-54.45°F (-48°C)

STORAGE/PACKAGING

VpCI-637/637 GL are available in 5 gallon (19 liter) containers, 55 gallon (208 liter) metal drums, liquid totes, and bulk. Products should be stored in tightly closed containers.

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