

Evaluation of Clear Pak Corrosion Preventative Packaging, a Product of Daubert VCI, Inc.

Background: It was requested that a sample of a competitors product be evaluated for performance and chemical composition. The clear, light blue bags claim to be nitrite free, and offer multi-metal corrosion protection.

Purpose: To evaluate the performance, and chemical composition of Clear Pak, a product of Daubert VCI, Inc.

Method: Razor Blade Tests (Carbon Steel and Copper)

VIA Test

FT-IR

Nitrite Test

Materials: Razor Blade Test Kits

VIA Test Kit

Paragon 1000 FT-IR, Perkin Elmer

EM Quant NO₂ Test Strips, EM Industries Inc., Gibbstown NJ

(charge/lot # OC130397, Oct. 04)

Procedure: The above tests were performed according to standard procedures for each.

Results:

Carbon Steel Razor Blade Test

Materials	Panel#1	Panel#2	Panel#3
Clear Pak VCI bag	Fail	Fail	Fail
Control	Fail	Fail	Fail

Copper Razor Blade Test

Materials	Panel#1	Panel#2	Panel#3
Clear Pak VCI bag	Fail	Fail	Fail
Control	Fail	Fail	Fail

VIA Test

Materials	Panel#1	Panel#2	Panel#3





Clear Pak VCI bag	Grade 0	Grade 1	Grade 1
Control	Fail	Fail	Fail

FT-IR: See attached FT-IR spectrum.

Conclusion: 1. Based on FT-IR results Clear Pak film contains only desiccant, which provides very limited corrosion protection.

2. Based on corrosion tests results Clear Pak doesn't provide any contact or vapor phase corrosion protection.

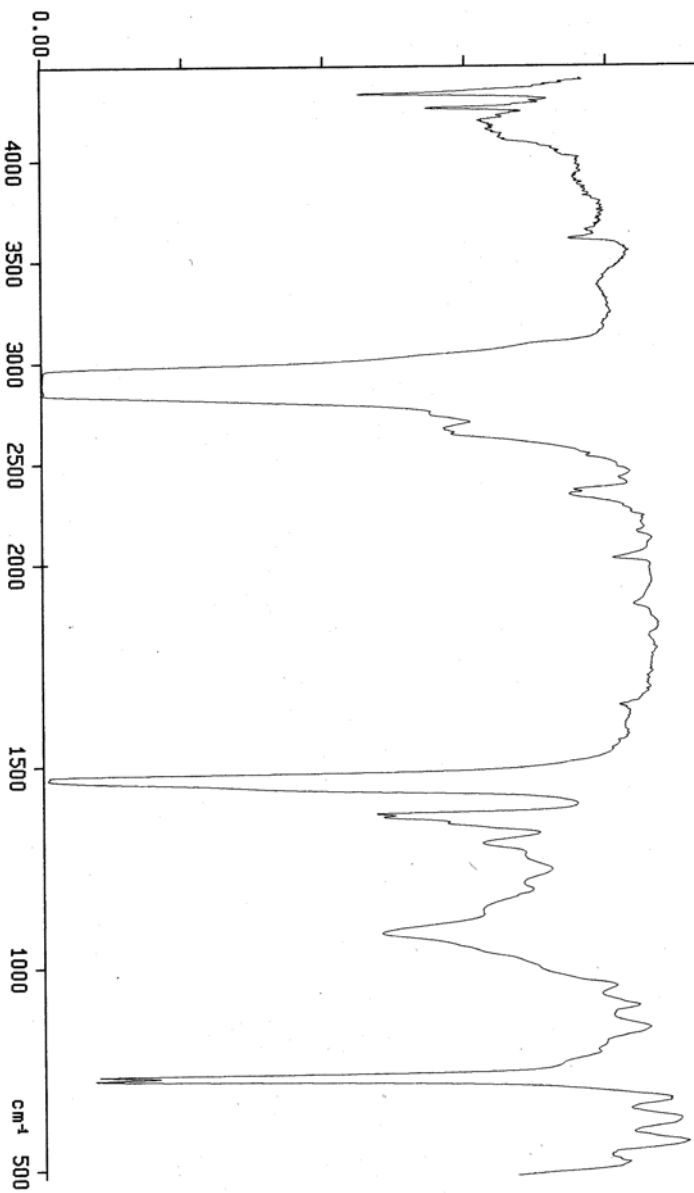
VIA Test Grades (Grade 2 or 3 are passing)

		
		Grade 0
		
		Grade 1
Grade 0:	Blind test No corrosion inhibiting effect	
Grade 1:	Blind test Minute corrosion inhibiting effect	Grade 2
Grade 2:	Blind test Medium corrosion inhibiting effect	
Grade 3:	Blind test Good corrosion inhibiting effect	Grade 3

Project #: 02-272-1125

PERKIN ELMER

100.00
%T



02/11/12 10:01 QA
X: 8 scans, 4.0cm⁻¹
CleanPak.proj# 02-272-1125, Nov 12-2002

**SODIUM NITRITE, 5.1, UN1500, PGIII, OXIDIZER/TOXIC
98 %-120 MESH**

Lot No: **NANI-03-171**

RQ: 100(45.4)

Net Wt. **50 LBS.**

CAS#: 7632-00-0

RTECS#: RA 1225000

FW: 69.00

MERK INDEX: 9,8407

Emergency Contact: **CHEMTREC: 1-800-424-9300**

CHEMTREC INTERNATIONAL: (703) 527-3887

HEALTH HAZARDS & FIRST AID:

MATERIAL IS DANGEROUS IF INHALED! IMMEDIATELY FLUSH EYES OR SKIN WITH COPIOUS AMOUNT OF WATER, FOR AT LEAST 15 MINUTES IN CASE OF CONTACT EXPOSURE. MATERIAL IS IRRITATING TO THE MUCOUS MEMBRANES AND UPPER RESPIRATORY TRACT. EXPOSURE SYMPTOMS MAY INCLUDE - BURNING SENSATION, COUGHING, WHEEZING, SHORTNESS OF BREATH, HEADACHES, LARYNGITIS, NAUSEA AND VOMITING, DIURESIS, ANEMIA, METHEMOGLOBINEMIA, NEPHRITIS, GASTROENTERITIS AND VASODILATION. IF MATERIAL HAS BEEN INHALED, REMOVE SUBJECT TO FRESH AIR. IF SUBJECT IS NOT BREATHING GIVE ARTIFICIAL RESPIRATION - PREFERABLY MOUTH-TO-MOUTH. IF BREATHING IS DIFFICULT OXYGEN SHOULD BE SUPPLIED. CONTAMINATED CLOTHING SHOULD BE REMOVED AND THOROUGHLY CLEANED BEFORE REUSE. CALL A PHYSICIAN! WASH THOROUGHLY AFTER HANDLING.

INCOMPATIBILITIES: ACIDS, ACID ANHYDRIDES, FUELS, (REDUCING AGENTS). EXPLOSIVE MIXTURES MAY RESULT FROM IMPROPER HANDLING!

PRODUCTS OF DECOMPOSITION: OXIDES OF SODIUM AND NITROGEN.

HANDLING & STORAGE: APPROPRIATE OSHA/MSHA APPROVED RESPIRATOR, CHEMICALLY RESISTANT GLOVES, CHEMICAL GOGGLES AND OTHER APPROPRIATE PROTECTIVE CLOTHING (RUBBER APRON OR OVERWEAR) SHOULD BE WORN. MECHANICAL EXHAUST IS REQUIRED. AVOID CONTACT WITH EYES, SKIN AND CLOTHING. DO NOT BREATHE DUST. AVOID PROLONGED AND REPEATED EXPOSURE. HYGROSCOPIC. KEEP CONTAINERS SEALED. STORE IN COOL DRY PLACE. OBSERVE PROPER PERSONAL HYGIENE. SAFETY SHOWER SHOULD BE AVAILABLE. THE PREFERRED FIRE EXTINGUISHING MEDIA IS WATER, DRY CHEMICAL POWDER, CARBON DIOXIDE OR POLYMER FOAM. MATERIAL IS NONCOMBUSTIBLE. PROTECT ADJACENT AREA!

***** INDUSTRIAL OR MANUFACTURING USE ONLY *****

