

# *Evaluating HDPE Packaging Film Containing Metpro Masterbatch*

**Background:** HDPE packaging film containing Metpro masterbatch was submitted for evaluation of VCI contents and corrosion protection performance. This film is very inexpensive. An evaluation and comparison with Cortec VpCI-129 is sought on the HDPE film containing Metpro masterbatch.

**Purpose:** Evaluate HDPE film containing Metpro masterbatch and compare with Cortec VpCI-129 film.

**Method:** Razor Blade Test

VIA Test

SO<sub>2</sub> Test

Analytical methods

**Materials:** Razor Blade Test Kit

VIA Test Kit

SO<sub>2</sub> Test Kit

Analytical kits

FT-IR

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

**Results:**

### Razor Blade Test

Material	Panel #1	Panel #2	Panel #3
HDPE film containing Metpro masterbatch	Fail	Fail	Fail
Cortec VpCI-129 film*	Pass	Pass	Pass
Control	Fail	Fail	Fail

\*Typical results of Cortec VpCI-129 film

### VIA Test

Material	Panel #1	Panel #2	Panel #3
HDPE film containing Metpro masterbatch	Grade 1	Grade 1	Grade 1

Cortec VpCI-129 film*	Grade 3	Pass	Pass
Control	Fail	Fail	Fail

\*Typical results of Cortec VpCI-129 film

SO<sub>2</sub> Test

Material	Panel #1	Panel #2	Panel #3
HDPE film containing Metpro masterbatch	Grade 4	Grade 4	Grade 4
Cortec VpCI-129 film*	Grade 4	Grade 4	Grade 4
Control	Fail	Fail	Fail

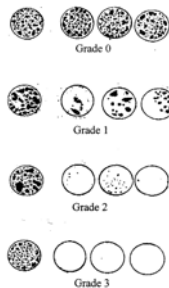
\*Typical results of Cortec VpCI-129 film

**Conclusion:**

1. The analytical tests results on Metpro masterbatch based film do not show any ingredients from the Cortec's masterbatch.
1. Based on FT-IR test results HDPE film, containing Metpro masterbatch doesn't show the presence of any VCI materials and most likely is desiccant based.
2. HDPE film containing Metpro masterbatch does not provide sufficient corrosion protection according to standard test procedures.

**Project #:** 03-046-1125

**VIA Test Grades (Grade 2 or 3 are passing)**



*SO<sub>2</sub> Grades (Grade 3 and 4 are passing):*

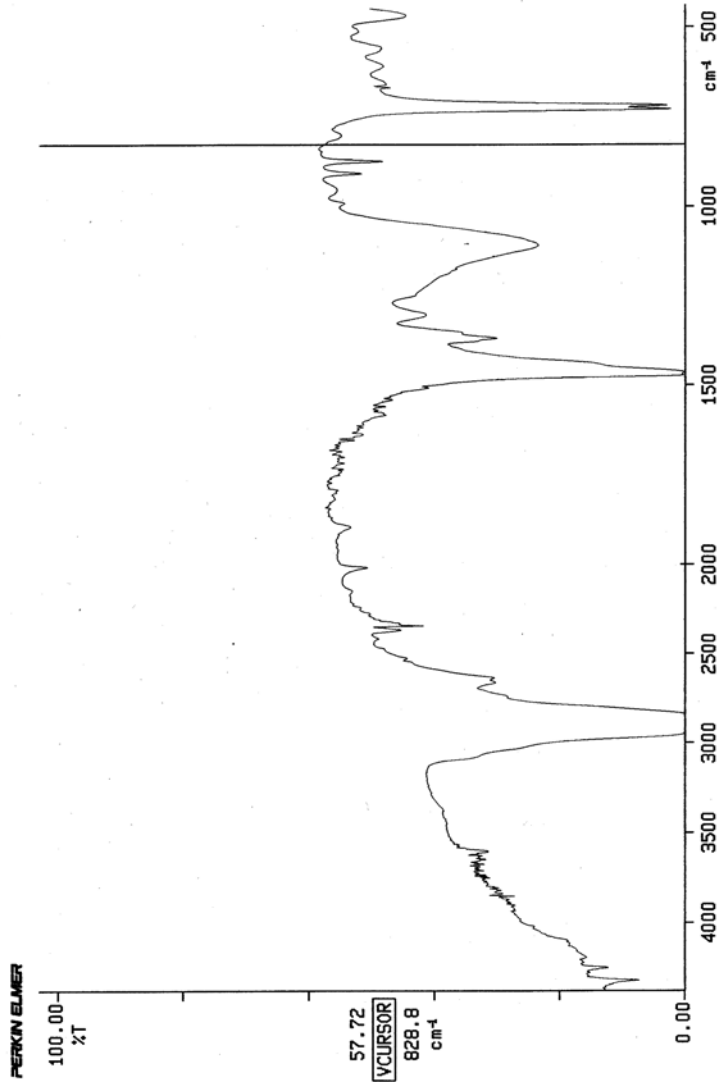
**Grade 0- Extensive corrosion covering 25% or more of panel surface**

**Grade 1- Moderate corrosion covering 10-25% of panel surface**

**Grade 2- Slight corrosion covering 5-10% of panel surface**

**Grade 3- Very slight corrosion covering 0-5% of panel surface**

**Grade 4- No visible corrosion on panel surface**



03/03/10 16:43 QR  
X: 8 scans, 4.0cm-1  
3 mil, hdpe film w/metpro masterbatch  
03-046-1125

**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  
FW: 69.00

RTECS#: RA 1225000  
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 \*\*\***

