

Evaluation of Film Manufactured By Magna Chemical for Corrosion Protection

Background: It was an interest to evaluate corrosion protection performance offered by the film manufactured by Magna Chemical.

Purpose: Evaluate corrosion protection performance of film manufactured by Magna Chemical.

Method: FT-IR Spectroscopy

Razor Blade Test

VIA Test

Nitrite Test

Materials: Paragon 1000 FT-IR, Perkin Elmer

Razor Blade Test Kit

VIA Test Kit

Yellow Film, manufactured by Magna Chemical, 4 mil

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

(charge/lot # 90397041)

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

Results:

FT-IR Spectroscopy: A peak corresponding to a sodium nitrite is apparent in spectrum.

Razor Blade Test

Material	Carbon Steel			Copper		
	Panel #1	Panel #2	Panel #3	Panel #1	Panel #2	Panel #3
Magna Chemical Film	Fail	Fail	Fail	Fail	Pass	Fail
Cortec VpCI™-126 Film*	Pass	Pass	Pass	Pass	Pass	Pass
Control	Fail	Fail	Fail	Fail	Fail	Fail

*Typical results for Cortec VpCI™-126 Film.

VIA Test

Material	Panel #1	Panel #2	Panel #3
Magna Chemical Film	Grade 0	Grade 1	Grade 1
Cortec VpCI™-126 Film*	Grade 3	Grade 3	Grade 3
Control	Fail	Fail	Fail

*Typical results for Cortec VpCI™-126 Film

Conclusion: Film from Magna Chemical is nitrite-based, doesn't contain sufficient amount of inhibitor and doesn't provide acceptable level of corrosion protection to the metals.

Project #: 01-314-1125(bis)

**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 *****

