



MATERIAL SAFETY DATA SHEET: HXC - HUMIDISORB PLUS X-CORRODE PACKETS

Section 1 PRODUCT AND COMPANY IDENTIFICATION

Manufacturer's Name and Address:

A+ Corporation, LLC
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Gonzales, LA 70737 Date Prepared: 01/03/09

PRODUCT NAME: HXC - HUMIDISORB PLUS X-CORRODE PACKETS (Includes all "HXC" prefix part numbers)

PRODUCT USE: Moisture and corrosion control packet for electrical and electronic enclosures

Section 2 PRODUCT INFORMATION

<u>Name</u>	<u>%</u>
A proprietary granular absorbent contained in a vapor permeable pouch	80 - 91
A proprietary granular vapor corrosion inhibitor in a vapor permeable pouch	9 - 20

Section 3 HAZARD IDENTIFICATION

Under normal conditions, the granules are enclosed in a pouch that does not allow skin or eye contact. The packet does not allow dust to escape.

If the packet, is damaged from abnormal conditions and the granules are exposed, then:

The granular absorbent (80 to 91 % of packet contents) is not hazardous according to the OSHA Haz Com Standard.

The granular vapor corrosion inhibitor (9 to 20% of packet contents) is hazardous according to the OSHA Haz Com Standard.

The granular vapor corrosion inhibitor is harmful if inhaled directly (acute inhalation expected to be toxic) and may be harmful if swallowed. Acute skin is essentially non-toxic by skin absorption. Not expected to be irritating. Not expected to be a skin sensitizer. Acute eye – may cause slight irritation. Acute ingestion – may be harmful if swallowed. No carcinogenic substances as defined by IARC, NTP and /or OSHA.

Section 4 FIRST AID MEASURES

Under normal conditions, the granules are enclosed in a pouch that does not allow skin or eye contact. The packet does not allow dust to escape.

If the packet, is damaged from abnormal conditions and the granules are exposed, then:

If inhaled:

Remove to fresh air. Get medical attention if irritation develops.

On skin contact:

Wash thoroughly with soap and water. Remove and launder contaminated clothing before reuse. If irritation develops, get medical attention.

On contact with eyes:

Immediately wash affected eyes for at least 15 minutes under running water with eyelids held open. If irritation develops, get medical attention.

On ingestion:

Rinse mouth and then drink plenty of water. Get immediate medical attention.

Notes to Physicians: None known. Treat according to symptoms (decontamination, vital functions). No known specific antidote.

Section 5

FIRE-FIGHTING MEASURES

Suitable extinguishing media:

Water spray, dry extinguishing media, foam

Unsuitable extinguishing media for safety reasons:

Carbon dioxide, water jet

Additional information:

Avoid whirling up the material/product because of the danger of dust explosion

Special protective equipment:

Wear a self-contained breathing apparatus.

Further information:

Contaminated extinguishing water must be disposed of in accordance with official regulations. The degree of risk is governed by the burning substance and the fire conditions.

Section 6

ACCIDENTAL RELEASE MEASURES

Under normal conditions, the granules are enclosed in a pouch that does not allow skin or eye contact. The packet does not allow dust to escape.

If the packet, is damaged from abnormal conditions and the granules are exposed, then:

See First Aid Measures.

Methods for cleaning up or taking up:

Remove mechanically by a method that minimizes the generation of airborne dust. Do not use compressed air for cleaning.

For large amounts: Contain with dust binding material and dispose of.

Section 7

HANDLING AND STORAGE

Handling:

Handle in accordance with good industrial hygiene and safety practice. Wash thoroughly after handling.

Under normal conditions, the granules are enclosed in a pouch that does not allow skin or eye contact. The packet does not allow dust to escape.

If the packet, is damaged from abnormal conditions and the granules are exposed, then:

Breathing must be protected without local exhaust ventilation.

Avoid the formation and deposition of dust.

Avoid contact with skin, eyes, or clothing.

Protection against fire and explosion:

The relevant fire protection measures should be noted.

Storage:

Further information on storage conditions: Containers should be tightly sealed in a dry place.

The granular vapor corrosion inhibitor ingredient shall not be heated above 320F (160C) or else a highly exothermic reaction may result.

Section 8 EXPOSURE CONTROLS AND PERSONAL PROTECTION

Under normal conditions, the granules are enclosed in a pouch that does not allow skin or eye contact. The packet does not allow dust to escape.

If the packet, is damaged from abnormal conditions and the granules are exposed, then:

Country specific exposure limits have not been established or are not applicable.

Use local and general exhaust ventilation.

Due to the granular vapor corrosion inhibitor, use NIOSH approved air-purifying particulate respirator with P-100 filters.

Hand protection:

Chemical resistant protective gloves

Eye protection:

Safety glasses with side-shields (frame goggles)

General safety and hygiene measures:

Handle in accordance with good industrial hygiene and safety practice. Wearing of closed work clothing is recommended. Wash hands and face before eating, drinking, or using tobacco products.

Section 9 PHYSICAL AND CHEMICAL PROPERTIES

	<u>Granular absorbent</u>	<u>Granular Vapor Corrosion Inhibitor</u>
Form:	granules	granules
Color:	white	pale yellow
Odor:	odorless	characteristic
Bulk Density:	approx. 500 kg/m ³	N/A
Solubility in water:	insoluble (20° C)	approx 19 g/L (20°C)
Boiling Point/Range	N/A	> 200°C (> 392°F)
Flash Point	N/A	approx 195°C (383°F)
Vapor Pressure N/A		approx 0.00001 mbar (25°C)
Specific Gravity	N/A	approx 1.19 (100°C)
Auto-ignition Temp	N/A	approx 400°C (752°F)
Decomposition Temp	N/A	approx 160°C (320°F)
Molecular Weight	N/A	119.1

Section 10**STABILITY AND REACTIVITY**

Under normal conditions, the granules are enclosed in a pouch that does not allow skin or eye contact. The packet does not allow dust to escape.

If the packet, is damaged from abnormal conditions and the granules are exposed, then:

Hazardous reactions:

The product is not a dust explosion risk as supplied. However, if the package is damaged from abnormal conditions, the build-up of fine dust can lead to a risk of dust explosion.

No hazardous decomposition from the granular absorbent if stored and handled as prescribed/indicated. The granular vapor corrosion inhibitor hazardous decomposition products by fire and thermal decomposition are carbon oxides and nitrogen oxides.

Avoid extreme heat.

Avoid oxidizing agents and reducing agents.

Stability: stable

Section 11**TOXICOLOGY INFORMATION**

Under normal conditions, the granules are enclosed in a pouch that does not allow skin or eye contact. The packet does not allow dust to escape.

If the packet, is damaged from abnormal conditions and the granules are exposed, then:

The granular absorbent represents 80 to 91 % of packet contents.

The granular vapor corrosion inhibitor represents 9 to 20% of packet contents.

Acute oral toxicity

LD50/oral/rat: > 2,000 mg/kg for absorbent and 560mg/kg for vapor corrosion inhibitor

Acute inhalation toxicity

Vapor Corrosion Inhibitor: LC50/rat: 1910mg/m³, 3 h (rat)

Acute dermal toxicity

LD50/dermal/rat: > 2,000 mg/kg for absorbent

LD50/dermal/rat: >1,000 mg/kg; LD50/dermal/rabbit: >2,000 mg/kg for vapor corrosion inhibitor.

Eye irritation: Vapor corrosion inhibitor - rabbit, slightly irritating

Primary skin irritation/rabbit: non-irritant (OECD Guideline 404)

Primary irritations of the mucous membrane/rabbit: non-irritant (OECD Guideline 405)

Sensitization:

No sensitizing effect (Guinea pig)

Repeated Dose Toxicity

Vapor Corrosion Inhibitor – 13 d, oral: NOAEL: 103 mg/kg (rat)

Mutagenicity:

Vapor Corrosion Inhibitor – Genetic Toxicity in Vitro:

Bacterial – gene mutation assay: positive (E.coli, Metabolic Activation: with/without)

Bacterial – gene mutation assay: positive (Salmonella typhimurium)

Carcinogenicity:

Vapor Corrosion Inhibitor

rat, Male/Female, oral, 78 w,

In Fischer 344 rats there was an increased incidence of brain tumors, however, there was no convincing evidence that under the conditions of this bioassay the component was carcinogenic in rats of either sex.

Mouse, Male/Female, oral, 78 w,

In female B6C3F1 mice there was an increased incidence of alveolar/bronchiolar carcinomas, however, there was no convincing evidence that under the conditions of this bioassay the component was carcinogenic in mice of either sex.

Absorbent:

Further information:

A chronic (2-year) lifetime inhalation study in rats with respirable dust (micronized to < 10 micrometer diameter) resulted in a non-specific inflammatory response in the lungs followed by tumor development in some rats in the highest chronic exposure level of 0.8 mg/m³. In the absence of chronic inflammation, tumors are not expected. Additional information:

The statement was derived from products of similar composition.

Section 12

ECOLOGICAL INFORMATION

Under normal conditions, the granules are enclosed in a pouch that does not allow skin or eye contact. The packet does not allow dust to escape.

If the packet, is damaged from abnormal conditions and the granules are exposed, then:

Ecotoxicity

Toxicity to fish:

OECD Guideline 203 static

Brachydanio rerio/LC50 (96 h): > 100mg/l

Aquatic invertebrates:

OECD Guideline 202, part 1 static

Daphnia magna/EC50 (48 h): >100mg/l for absorbent and 63 mg/l for vapor corrosion inhibitor

Nominal concentration

Microorganisms/Effect on activated sludge:

Absorbent:

The inhibition of the degradation activity of activated sludge is not anticipated when introduced to biological treatment plants in appropriate low concentrations.

Vapor Corrosion Inhibitor:

EC50: 1,060 mg/l

Soil living organisms:

OECD Guideline 207

Eisenia foetida/LC50: >1.000 mg/kg

Persistence and degradability

Absorbent Assessment: The product is not very soluble in water and can thus be removed

