CORPORATION, LLC

41041 Black Bayou Rd, Gonzales, Louisiana, USA 70737
Phone (225) 644-5255 FAX (225) 644-3975
www.geniefilters.com sales@geniefilters.com

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

SECTION 1 IDENTIFICATION

Product Identifier:	HXC – Humidisorb Plus X-Corrode Packets (Includes all "HXC" prefix part numbers)
Manufacturer:	A+ Corporation, LLC 41041 Black Bayou Rd. Gonzales, LA 70737
Emergency Phone**:**	(225) 644-5255
Recommended Use:	Moisture and corrosion control packet for electrical/electronic enclosures

SECTION 2 HAZARD INFORMATION

HAZCOM Standard Status: The granular absorbent (80-91% of packet contents) is not hazardous according to the OSHA Hazard Communication Standard
The granular vapor corrosion inhibitor (9-20% of packet contents) is hazardous according to the OSHA Hazard Communication Standard

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 only the vapor corrosion inhibitor portion of the packet is as follows:

Classification of the mixture:	When packet is damaged: combustible dusts, acute toxicity (oral) – Category 4 and serious eye damage/eye irritation – Category 2
Signal word:	Warning
Hazard Not Otherwise Classified (HNOC):	None known

Pictogram:

Precautionary Statements:

Prevention:	If packet is damaged, wear eye/face protection. Do not eat, drink or smoke when using this product. Wash hands thoroughly after handling
Response:	Get medical attention if you feel unwell. If packet granules are swallowed, rinse mouth. If packet granules are in eyes, rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing. If eye irritation persists, get medical attention.
Storage:	Not applicable.
Disposal:	Dispose of in accordance with all local, regional, national, and international regulations

SECTION 3 COMPOSITION/INFORMATION ON INGREDIENTS

The specific non-hazardous chemical identity has been withheld as a trade secret

Name	%
A proprietary non-hazardous granular absorbent contained in a vapor permeable pouch	80 – 91
Benzotriazole CAS number: 95-14-7 vapor corrosion inhibitor in a vapor permeable pouch	9 – 20

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health and hence require reporting in this section.

SECTION 4 FIRST-AID MEASURES

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

If the packet is damaged from abnormal conditions and the granules are exposed, then only the vapor corrosion inhibitor portion of the packet (less than 20% of the contents) is as follows:

Eye Contact: Check for and remove contact lenses. Get medical attention. In case of contact, flush eyes with plenty of water for at least 20 minutes. Use fingers to ensure that eyelids are separated and that the eye is being irrigated.

Inhalation: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. In case of inhalation of decomposition products in a fire, symptoms

may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours. If not breathing, if breathing is irregular or respiratory arrest occurs, provide artificial respiration, or oxygen by a trained professional, using a pocket type respirator.

Skin Contact: Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. Wash clothing before reuse. Clean thoroughly before reuse.

Ingestion: Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt, or waistband.

Potential acute health effects:
Eye Contact: Causes serious eye irritation. May cause mechanical irritation (abrasion).
Inhalation: May give off gas, vapor or dust that is very irritating or corrosive to the respiratory system.
Skin Contact: May cause mechanical irritation (abrasion).
Ingestion: Harmful if swallowed. Irritating to mouth, throat and stomach.
Over-exposure signs/symptoms:
Eye Contact: Causes irritation with symptoms of reddening, tearing, stinging, and swelling.
Inhalation: No specific data
Skin Contact: No specific data
Ingestion: Symptoms of ingestion may include abdominal pain, nausea, vomiting, and diarrhea.
Potential chronic health effects:
Repeated or prolonged inhalation of dust may lead to chronic respiratory irritation.
Notes to physician: Treat symptomatically. No specific treatment
Protection of first-aiders: No special measures required.

SECTION 5 FIRE-FIGHTING MEASURES

Extinguishing media:
Suitable extinguishing media: Use dry chemical powder

Unsuitable extinguishing media: Do not use water jet

Specific hazards arising from the chemical: In the event of fire be aware of formation of noxious fumes. Fine dust clouds may form explosive mixtures with air.

Hazardous thermal decomposition products:	Decomposition products may include the following materials: carbon dioxide, carbon monoxide, nitrogen oxides
Special protective actions the for firefighters:	Promptly isolate the scene by removing all persons from vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.
Special protective equipment for firefighters:	Firefighters should wear appropriate protective equipment and self-contained apparatus (SCBA) with a full face-piece operated in positive pressure mode.

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 only the vapor corrosion inhibitor portion (less than 20%) of the packet is as follows:

See Section 4 First Aid Measures.

Methods for cleaning up or taking up:	Avoid dust generation. Do not dry sweep. Remove mechanically by a method that minimizes the generation of airborne dust. Do not use compressed air for cleaning. Vacuum dust with equipment fitted with a HEPA filter and place in a closed, labeled waste container.

SECTION 7 HANDLING AND STORAGE

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 only the vapor corrosion inhibitor portion (less than 20%) of the packet is as follows:

Precautions for safe handling

Protective measures:	Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing dust. Avoid the creation of dust when handling and avoid all possible sources of ignition (spark or flame). Prevent dust accumulation. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Electrical

	equipment and lighting should be protected to appropriate standards to prevent dust coming into contact with hot surfaces, sparks or other ignition sources. Take precautionary measures against electrostatic discharges. Remove contaminated clothing and protective equipment before entering eating areas. Workers should wash hands and face before eating, drinking and smoking. Put on appropriate personal protection equipment. Eating, drinking, and smoking should be prohibited in areas where this material is handled, stored and processed. Use non-sparking tools and equipment.
Conditions for safe storage:	Store in accordance with local regulations. Store in original sealed packet protected from direct sunlight in a cool and dry area.

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 only the vapor corrosion inhibitor portion (less than 20%) of the packet is as follows:

Occupational exposure limits:No exposure limit value known

Appropriate engineering controls:	If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits.
Personal protection	
Hygiene measures:	Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.
Respiratory protection:	Although no exposure limit has been established for this product, the OSHA PEL for Particulates Not Otherwise Regulated (PNOR) of 15 mg/m3 – total dust, mg/m3 – respirable fraction is recommended. In addition, the ACGIH recommends 3mg/m3 – respirable particles and 10 mg/m3 – inhalable particles for Particles (insoluble or poorly soluble) Not Otherwise Specified (PNOS). The following respirator is recommended if airborne concentrations exceed the appropriate standard/guideline.

	HIOSH approved, air-purifying particulate respirator with N-95 filters.
Skin Protection:	Wear suitable protective clothing and gloves. Suitable protective footwear.
Eye/face protection:	Chemical splash goggles
Medical Surveillance:	Not available

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

	Granular absorbent	Granular Vapor Corrosion Inhibitor
Form:	granules	granules
Color:	white	white to slight dyed
Upper/lower flammability or explosive limits:	Not Available	Not Available
Odor:	odorless	characteristic (Slight)
Vapor Density:	Not Available	Not Available
pH:	Not Available	Not Available
Relative Density:	0.5 g/cc	1.36g/cc
Melting point:	Not Available	94 - 99°C (201.2 – 210.2°F)
Solubility in water:	insoluble (20° C)	19 g/l (20°C)
Boiling Point:	Not Available	> 200°C (> 392°F)
Flash Point:	Not Available	Closed Cup: 195°C (383°F)
Evaporation rate:	Not Available	Not Available
Flammability:	Not Available	Not Available
Partition coefficient:	Not Available	Not Available
Ignition temp:	Not Available	400°C (752°F)
Decomposition temp:	Not Available	Not Available
Viscosity:	Not Available	Not Available

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 only the vapor corrosion inhibitor portion (less than 20%) of the packet is as follows:

Reactivity:	No specific test data related to reactivity available.
Chemical Stability:	Stable
Possibility of hazardous reactions:	Under normal conditions of storage and use, hazardous reactions will not occur.
Conditions to avoid:	Extremes of temperature and direct sunlight
Incompatible materials:	Reducing agents, oxidizing agents, acids and bases
Hazardous decomposition products:	Under normal conditions of storage and use, hazardous decomposition products should not be produced.

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 only the vapor corrosion inhibitor portion (less than 20%) of the packet is as follows:

Information on the likely routes of exposure: Dermal contact. Eye contact. Inhalation. Ingestion.

Potential acute health effects

Eye contact: Causes serious eye irritation. May cause mechanical irritation (abrasion).

Inhalation: May give off gas, vapor, or dust that is very irritation or corrosive to the respiratory system.

Skin contact: May cause mechanical irritation (abrasion).

Ingestion: Harmful if swallowed. Irritation to mouth, throat and stomach.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact: Causes irritation with symptoms of reddening, tearing, stinging, and swelling.

Inhalation: No specific data

Skin contact: No specific data

Ingestion: Symptoms of ingestion may include abdominal pain, nausea, vomiting, and diarrhea.

Potential chronic health effects

Short term exposure

Potential immediate effects: Not available

Long term exposure

Potential delayed effects: Not available

General: Repeated or prolonged inhalation of dust may lead to chronic respiratory irritation.

Carcinogenicity: No known significant effects or critical hazards.

Mutagenicity: No known significant effects or critical hazards.

Teratogenicity: No known significant effects or critical hazards.

Developmental effects: No known significant effects or critical hazards.

Fertility effects: No known significant effects or critical hazards.

Information on toxicological effects

Acute toxicity

Ingredient	Result	Species	Dose	Exposure	Test
Vapor Corrosion Inhibitor	LD50 Oral	Rat	560 mg/kg	-	-

	LD50 Dermal	Rabbit	>2000 mg/Kg	-	-
	LC50 Inhalation Dusts and mists	Rat	1910 mg/m3	3 hours	-

Irritation/Corrosion

Ingredient	Result	Species	Score	Exposure	Observation	Reversibility
Vapor Corrosion Inhibitor	Skin – Erythema/Eschar	Rabbit	0	72 hours	-	-
	Skin – Edema	Rabbit	0	72 hours	-	-
	Eyes – Cornea opacity	Rabbit	0	72 hours	-	-
	Eyes – Iris lesion	Rabbit	0	72 hours	-	-
	Eyes – Edema of the conjunctivae	Rabbit	0.66	72 hours	-	Fully reversible in more than 7 days
	Eyes – redness of the conjunctivae	Rabbit	0	72 hours	-	-
	Eyes – cornea opacity	Rabbit	1	24 hours	-	-
	Eyes – cornea opacity	Rabbit	0.66	48 hours	-	-
	Eyes – iris lesion	Rabbit	0.33	24 hours	-	-
	Eyes – iris lesion	Rabbit	0.33	48 hours	-	-
	Eyes – Edema of the conjunctivae	Rabbit	1.33	24 hours	-	Fully reversible in more than 7 days
	Eyes – Edema of the conjunctivae	Rabbit	1.66	48 hours	-	Fully reversible in more than 7 days
	Eyes – Edema of the conjunctivae	Rabbit	1.33	24 hours	-	
	Eyes – Edema of the conjunctivae	Rabbit	0.33	48 hours	-	

Conclusion/Summary

Skin: Non-irritating: tested on rabbits

Eyes: Slightly irritant: tested on rabbit eyes

Sensitization

Ingredient	Route of exposure	Species	Result
Vapor Corrosion Inhibitor	Skin	Guinea pig	Not sensitizing

Mutagenicity

Ingredient	Test	Experiment	Result
Vapor Corrosion Inhibitor	OECD 471 Bacterial Reverse Mutation Test	Experiment: in vitro	Negative
	OECD 476 in vitro mammalian cell gene mutation test	Subject: bacteria Experiment: in vitro	Negative
	OECD 474 mammalian erythrocycle micronucleus test	Subject: mammalian-animal Experiment: in vitro Subject: Mammalian-animal	Negative

Carcinogenicity

Ingredient	CAS #	IARC	NTP	OSHA
Vapor Corrosion Inhibitor	95-14-7	Not classified	Not classified	Not classified

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 only the vapor corrosion inhibitor portion of the packet is as follows:

Toxicity

Ingredient	Test	Result	Species	Exposure
Vapor Corrosion Inhibitor	-	Acute EC50 75 mg/l	Algae – Pseudokirchneriella subcapitata	72 hours
	-	Acute EC50 15.8 mg/l	Daphnia – daphnia magna	48 hours
	-	Acute LC50 180 mg/l	Fish – Danio rerio	96 hours
	-	Chronic EC10 1.18 mg/l	Algae – Desmodesmus Subspicatus	72 hours
	-	Chronic EC50 0.97 mg/l	Daphnia – daphnia galeata	21 days

Conclusion/Summary: Not available

Persistence and degradability

Ingredient	Test	Result	Dose	Inoculum
Vapor Corrosion Inhibitor	OECD 302B Inherent biodegradability: Zahn-Wellens/EMPA	83% - Inherent – 28 days	-	-
	Test Closed bottle test.	0% - Not readily – 5 days	-	-

Conclusion/Summary: Not available

Ingredient	Aquatic half-life	Photolysis	Biodegradability
Vapor Corrosion Inhibitor	-	-	Not readily

Bioaccumulative potential

Ingredient	LogPow	BCF	Potential
Vapor Corrosion Inhibitor	1.34	4.14	low

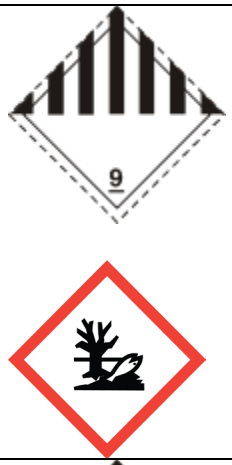
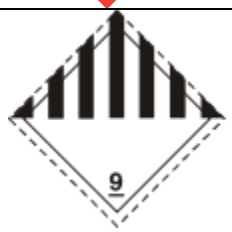
Mobility in soil
Soil/water partition coefficient (Koc): Not available
Other adverse effects: No known significant effects or critical hazards.

SECTION 13 DISPOSAL CONSIDERATIONS

Disposal methods: The generation of waste should be avoided or minimized wherever possible. This material should be disposed of in a safe way. Waste disposal should be in accordance with existing federal, state, provincial and or local environmental controls laws.

RCRA classification: If discarded in its purchased form, this product would not be a hazardous waster either by listing or by characteristic. However, under RCRA, it is the responsibility of the product user to determine at the time of disposal, whether the material contained in the product should be classified as a hazardous waste. (40 CFR 261.20-24)

SECTION 14 TRANSPORT INFORMATION

Regulatory Information	UN number	Proper shipping name	Classes	Packing Group	Label	Additional information
DOT classification	-	-	-	-		Not regulated
IMDG Class	UN3077	Environmentally hazardous substance, solid, N.O.S. (benzoriazole portion only – less than 20% of mixture)	9	III		Emergency Schedules (EmS) F-A, S-F
IATA-DGR Class	UN3077	Environmentally hazardous substance, solid, N.O.S. (benzoriazole portion only – less than 20% of mixture))	9	III		Passenger aircraft 956:400 kg Cargo aircraft 956: 400 kg

RQ: 0 lbs

SECTION 15 REGULATORY INFORMATION

SARA 311/312: Acute

SARA Title III Section 302: None
Extremely Hazardous Substances

SARA Title III Section 313: None
Toxic chemicals

US EPA CERCLA: None
Hazardous Substances (40 CFR 302)

State regulations

The following chemicals are specifically listed by individual states; other product specific health and safety data in other sections on the SDS may also be applicable for state requirements. For details on your regulatory requirements you should contact the appropriate agency in your state.

Vapor Corrosion Inhibitor portion only (less than 20% of the mixture)

Massachusetts Substances:	MA-S
Massachusetts Extraordinary Hazardous Substances:	MA – Extra HS
New Jersey Hazardous Substances:	NJ – HS
Pennsylvania RTK Hazardous Substances:	PA – RTK HS
Pennsylvania Special Hazardous Substances:	PA – Special HS

California Prop 65

To the best of our knowledge, this product does not contain any of the listed chemicals, which the state of California has found to cause cancer, birth defects or other reproductive harm.

US Toxic Substances Control Act: Listed on the TSCA Inventory

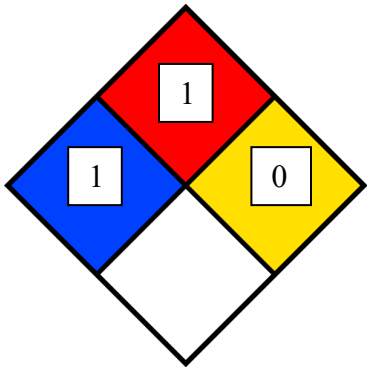
SECTION 16 OTHER INFORMATION

Hazardous Material Information System:

Health	1
Flammability	1
Physical hazards	0

0 = Insignificant 1 = Slight 2 = Moderate 3 = High 4 = Extreme

The customer is responsible for determining the PPE code for this material.



Blue = Health = 1
Red = Flammability = 1
Yellow = Physical Hazards = 0

0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe

Other Non-GHS Classification: D2B

SELF REGENERATING DESSICANT AND A VAPOR CORROSION INHIBITOR

DESSICANT AUTO-RÉGÉNÉRANT ET INHIBITEUR DE VAPEUR CORROSIVE

CAUTION!		**MISE EN GARDE!**
Granules are slippery when wet		**Les granulés sont glissants lorsqu'ils sont mouillés**
Vacuum if spilled		**Utiliser un aspirateur si le produit est renversé**
Keep away from children		**Tenir hors de portée des enfants**
For Industrial use only		**Pour utillsation Industrielle seuiement**

SEE MATERIAL SAFETY DATA SHEET FOR PRODUCT
VOIR LA FICHE SIGNALETIQUE

A+ CORPORATION, LLC
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