

SAFETY DATA SHEET

Finished Product



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ECG Inert Dusting Gas RX1100-10


SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Brand Name	RX1100-10
Product Description:	ECG Inert Dusting Gas, ECG Jet Air Cleaner
Product Code	RX1100-10
Marketer Contact Information:	NTE Electronics, Inc. 44 Farrand Street Bloomfield, NJ 07003 973-748-5089
Emergency Phone:	CHEMTREC 800-424-9300

SECTION 2. HAZARDS IDENTIFICATION

OSHA/HCS Status	This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200)
Classification of the Substance or Mixture	SKIN CORROSION/IRRITATION – Category 2 SERIOUS EYE DAMAGE/EYE IRRITATION – Category 2A
Ingredients of Unknown Toxicity	Percentage of the mixture consisting of ingredient(s) of unknown toxicity: 2%

GHS Label Elements

Hazard Pictograms	
Single Word	Warning
Hazard Statements	Contains gas under pressure; may explode if heated.

Precautionary Statements

Prevention	Not Applicable.
Response	Not Applicable.
Storage	Protect from sunlight. Store in a well-ventilated place.
Disposal	Not Applicable.
Hazards Not Otherwise Classified	None known

SECTION 3. COMPOSITION / INFORMATION OF INGREDIENTS

Substance/Mixture	Mixture
Other Means of Identification	Inert Dusting Gas, HFC-134a

CAS Number/Other Identifiers

CAS Number	Not Applicable
Product Code	RX1100-10

SECTION 3. COMPOSITION / INFORMATION OF INGREDIENTS (Cont'd)

Ingredient Name	%	CAS Number
1,1,1,2 Tetrafluoroethane	100	811-97-2

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

There are no ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment, and hence require reporting in this section. Occupational exposure limits, if available, are listed in Section 8.

SECTION 4. FIRST-AID MEASURES**Description of Necessary First Aid Measures**

Ingestion	Wash out mouth with water. Remove dentures if any. 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. Stop if the exposed person feels sick as vomiting may be dangerous. 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 if adverse health effects persist or are severe. 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 collar, tie, belt, or waistband.
Inhalation	Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular, or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. 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.
Skin Contact	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Continue to rinse for at least 10 minutes. Get medical attention. Wash clothing before reuse. Clean shoes thoroughly before reuse.
Eye Contact	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.

Most Important Symptoms/Effects, Acute and Delayed**Potential Acute Health Effects**

Eye Contact	Irritating to eyes. May cause severe eye irritation
Inhalation	Harmful by inhalation. At very high concentrations, can displace the normal air and cause suffocation from lack of oxygen.
Skin Contact	Contact with rapidly expanding gas may cause burns or frostbite. May cause skin irritation.
Ingestion	No known significant effects or critical hazards.

Over-Exposure Sign/Symptoms

Eye Contact	Adverse symptoms may include the following: Irritation Redness
Inhalation	Adverse symptoms may include the following: Respiratory tract irritation Coughing Dizziness/Vertigo Drowsiness/Fatigue Central Nervous System Depression Nausea or Vomiting Unconsciousness

SECTION 4. FIRST-AID MEASURES (Cont'd)

Over-Exposure Sign/Symptoms (Cont'd)

Skin Contac	Adverse symptoms may include the following: Frostbite Pain or Irritation Redness Dryness
Ingestion	No specific data.

Indication of Immediate Medical Attention and Special Treatment Needed, If Necessary

Notes to Physician	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
Specific Treatments	No specific treatment.
Protection of First-Aiders	No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

See Toxicological Information (Section 11)

SECTION 5. FIRE FIGHTING MEASURES

Extinguishing Media

Suitable Extinguishing Media:	Use an extinguishing agent suitable for the surrounding fire.
Unsuitable Extinguishing Media:	None known.
Specific Hazards Arising from the Chemical:	In a fire or if heated, a pressure increase will occur and the container may burst. Bursting aerosol containers may be propelled from fire at high speed.
Hazardous Thermal Decomposition Products	Decomposition products may include the following materials: Carbon Dioxide Carbon Monoxide Halogenated Compounds
Special Protective Actions for Firefighters	Promptly isolate the scene by removing all persons from the 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 or Firefighters	Firefighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures

For Non-Emergency Personnel	No action shall be taken involving any personal risk without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. In the case of aerosols being ruptured, care should be taken due to the rapid escape of the pressurized contents and propellant. If a large number of containers are ruptured, treat as a bulk material spillage according to the instructions in the clean-up section. Do not touch or walk through spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
For Emergency Responders	If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For Non-Emergency Personnel".
Environmental Precautions	Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains, and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil, or air).

SECTION 6. ACCIDENTAL RELEASE MEASURES (Cont'd)

Methods and Materials for Containment and Cleaning Up

Small Spill	Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternately, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
Large Spill	Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements, or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite, or diatomaceous earth and place in container for disposal according to local regulations (See Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: See Section 1 for emergency contact information and Section 13 for waste disposal.

SECTION 7. HANDLING AND STORAGE

Precautions for Safe Handling

Protective Measures	Put on appropriate personal protective equipment (See Section 8). Pressurize container: protect from sunlight and do not expose to temperatures exceeding +50°C. Do not pierce or burn, even after use. Do not ingest. Avoid contact with eyes, skin, and clothing. Avoid breathing gas. Avoid breathing vapor or mist. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Empty containers retain product residue and can be hazardous.
Advice on General Occupational Hygiene	Eating, drinking, and smoking should be prohibited in area where this material is handled, stored, and processed. Workers should wash hands and face before eating, drinking, and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
Conditions for Safe Storage, Including any Incompatibilities	Store in accordance with local regulations. Store away from direct sunlight in a dry, cool, and well ventilated area, away from incompatible materials (See Section 10) and food and drink. Protect from sunlight. Use appropriate containment to avoid environmental contamination.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

CONTROL PARAMETERS

Occupational Exposure Limits

Conclusion/Summary	None
Appropriate Engineering Controls	Use only with adequate ventilation. 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.
Environmental Exposure Controls	Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters, or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION (Cont'd)

CONTROL PARAMETERS (Cont'd)

Individual Protection Measures

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.
Eye/Face Protection	Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases, or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields..

Skin Protection

Hand Protection	Chemical-resistant, impervious gloves, complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.t
Body Protection	Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
Other Skin Protection	Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory Protection

Respiratory Protection	Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.
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SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

Physical State	Gas. [Liquefied Compressed Gas.]
Color	Colorless
Odor	Faint Odor. Ethereal.
Odor Threshold	Not Available.
pH	Not Applicable.
Melting Point	-101°C (-149.8°F)
Boiling Point	-26.2°C (-15.2°F)
Flash Point	[Product does not sustain combustion]
Evaporation Rate	> 1 (CCL4 = 1)
Flammability (Solid, Gas)	Not Available.
Lower and Upper Explosive (Flammable) Limits	Not Available.
Vapor Pressure	483.2kPa (3624mm Hg) [room temperature]
Vapor Density	3.5 [Air = 1]
Relative Density	Not Available
Solubility	Very slight soluble in the following materials: cold water and hot water

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES (Cont'd)**Appearance (Cont'd)**

Partition Coefficient: n-octanol/water	Not Available.
Auto-Ignition Temperature	> +750°C (> +1382°F)
Decomposition Temperature	Not Available.
Viscosity	Not Available.

Aerosol Product

Type of Aerosol	Spray
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SECTION 10. STABILITY AND REACTIVITY

Reactivity	No specific test data related to reactivity available for this product or its ingredients.
Chemical Stability	This product is stable.
Possibility of Hazardous Reactions	Under normal conditions of storage and use, hazardous reactions will not occur.
Conditions to Avoid	No specific data.
Incompatible Materials	No specific data.
Hazardous Decomposition Products	Under normal conditions of storage and use, hazardous decomposition products should not be produced.

**SECTION 11. TOXICOLOGICAL INFORMATION
INFORMATION ON TOXICOLOGICAL EFFECTS****Acute Toxicity**

Conclusion/Summary	Not Available
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Irritation/Corrosion

Conclusion/Summary	Not Available
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Sensitization

Conclusion/Summary	Not Available
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Mutagenicity

Conclusion/Summary	Not Available
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Carcinogenicity

Conclusion/Summary	Not Available
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Reproductive Toxicity

Conclusion/Summary	Not Available
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Teratogenicity

Conclusion/Summary	Not Available
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Specific Target Organ Toxicity (Single Exposure)

Conclusion/Summary	Not Available
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Specific Target Organ Toxicity (Repeated Exposure)

Conclusion/Summary	Not Available
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Aspiration Hazard

Conclusion/Summary	Not Available
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Information on the Likely Routes of Exposure	Not Available
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SECTION 11. TOXICOLOGICAL INFORMATION (Cont'd)**Potential Acute Health Effects**

Eye Contact	Irritating to eyes. May cause severe eye irritation.
Inhalation	Harmful but inhalation. At very high concentrations, can displace the normal air and cause suffocation from lack of oxygen.
Skin Contact	Contact with rapidly expanding gas may cause burns or frostbite. May cause skin irritation.
Ingestion	No known significant effects or critical hazards.

Symptom Related to the Physical, Chemical, and Toxicological Characteristics

Eye Contact	Adverse symptoms may include the following: Irritation Redness
Inhalation	Adverse symptoms may include the following: Respiratory Tract Irritation Coughing Dizziness/Vertigo Drowsiness/Fatigue Central nervous System Depression Nausea or Vomiting Unconsciousness
Skin Contact	Adverse symptoms may include the following: Frostbite Pain or Irritation Redness Dryness
Ingestion	No specific data.

Delayed and immediate Effects and also Chronic Effects from Short and Long Term Exposure**Short Term Exposure**

Potential Immediate Effects	Not Available
Potential Delayed Effects	Not Available

Long Term Exposure

Potential Immediate Effects	Not Available
Potential Delayed Effects	Not Available

Potential Chronic Health Effects

Conclusion/Summary	Not Available
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General	No Known Significant Effects of Critical Hazards
Carcinogenicity	No Known Significant Effects of Critical Hazards
Mutagenicity	No Known Significant Effects of Critical Hazards
Teratogenicity	No Known Significant Effects of Critical Hazards
Developmental Effects	No Known Significant Effects of Critical Hazards
Fertility Effects	No Known Significant Effects of Critical Hazards

Numerical Measures of Toxicity**Acute Toxicity Estimates**

Conclusion/Summary	Not Available
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SECTION 12. ECOLOGICAL INFORMATION**Toxicity**

Conclusion/Summary	Not Available
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Persistence/Degradability

Conclusion/Summary	Not Available
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SECTION 12. ECOLOGICAL INFORMATION (Cont'd)

Bioaccumulative Potential

Conclusion/Summary	Not Available
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Mobility in Soil

Soil/Water Partition Coefficient (K _{oc})	Not Available
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SECTION 13. DISPOSAL CONSIDERATIONS

Disposal Methods	The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions, and any other by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Disposal of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Do not puncture or incinerate container.
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SECTION 14. TRANSPORT INFORMATION

	DOT Classification	TDG Classification	Mexico Classification	ADR/RID	IMDG	IATA
UN Number	-	-	-	UN3159	UN3159	UN3159
UN Proper Shipping Name	Consumer Commodity ORM-D DOT-SP 15146	Packaging Not Approved For Export to Canada	Consumer Commodity ORM-D	1,1,1,2 Tetrafluoroethane	1,1,1,2 Tetrafluoroethane	1,1,1,2 Tetrafluoroethane
Transport Hazard Class(es)	ORM-D	-	ORM-D	2.2 	2.2 	9 
Packing Group	-	-	-	-	-	-
Environmental Hazards	No	-	No	No	No	No
Additional Information	Special Provisions Must have a copy of DOT-SP 15146 with each shipment.	Packaging Not Approved For Export to Canada	-	Pkg. Insr. 200.; Authorization; DOT-SP 15146.; NOTE: Copy of the Exemption is required with all shipments.	Pkg. Insr. 200.; Authorization; DOT-SP 15146.; NOTE: Copy of the Exemption is required with all shipments.	Passenger and Cargo Aircraft Quantity limitation: 75kg Packaging instructions: 200 Cargo Aircraft Only Quantity limitation: 150kg Packaging instructions: 200 Limited Quantities – Passenger Aircraft Quantity limitation: Forbidden Packaging instructions: 200

Special Precautions for User	Transport within user's premises: always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.
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Transport in Bulk According to Annex II of MARPOL 73/78 and the IBC Code	Not Available
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SECTION 15. REGULATORY INFORMATION**U.S. Federal Regulations**

TSCA 8(a) – CDR Exempt/Partial Exemption	Not Determined All components are listed or exempted.
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Clean Air Act Section 112(b) Hazardous Air Pollutants (HAPs)

Classification	Not Listed
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Clean Air Act Section 602 Class I Substances

Classification	Not Listed
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Clean Air Act Section 602 Class II Substances

Classification	Not Listed
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DEA List I Chemicals (Precursor Chemicals)

Classification	Not Listed
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DEA List II Chemicals (Essential Chemicals)

Classification	Not Listed
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SARA 302/304

Composition/Information on Ingredients	No Products Were Found
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SARA 304 RQ

Classification	No Applicable
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SARA 311/312

Classification	Sudden Release of Pressure
Composition/Information on Ingredients	No Products Were Found

State Regulations

Massachusetts	None of the Components are Listed.
New York	None of the Components are Listed.
New Jersey	None of the Components are Listed.
Pennsylvania	None of the Components are Listed.

International Regulations**Chemical Weapon Convention List Schedules I, II & III Chemicals**

Classification	Not Listed
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Montreal Protocol (Annexes A, B, C, E)

Classification	Not Listed
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Stockholm Convention on Persistent Organic Pollutants

Classification	Not Listed
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Rotterdam Convention on Prior Inform Consent (PIC)

Classification	Not Listed
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UNECE Aarhus Protocol on POPs and Heavy Metals

Classification	Not Listed
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International Lists**National Inventory**

Australia	All Components are Listed or Exempted.
Canada	All Components are Listed or Exempted.
China	All Components are Listed or Exempted.
Europe	No Determined.
Japan	All Components are Listed or Exempted.

SECTION 15. REGULATORY INFORMATION (Cont'd)**International Lists (Cont'd)****National Inventory (Cont'd)**

Malaysia	No Determined.
New Zealand	All Components are Listed or Exempted.
Philippines	All Components are Listed or Exempted.
Republic of Korea	All Components are Listed or Exempted.
Taiwan	No Determined.

SECTION 16. OTHER INFORMATION**Hazardous Material Information System (U.S.A.)**

Health	1
Flammability	1
Physical Hazards	0

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings are not required on MSDSs under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the national Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J.J. Keller (800) 327-6868. The customer is responsible for determining the PPE code for this material.

National Fire Protection Association (U.S.A.)

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Copyright ©2001, National Fire Protection Association, Quincy, MA 02269. This warning system is intended to be interpreted and applied only by properly trained individuals to identify fire, health, and reactivity hazards of chemicals. The user is referred to certain limited number of chemicals with recommended classifications in NFPA 49 and NFPA 325, which would be used as a guideline only. Whether the chemicals are classified by NFPA or not, anyone using the 704 system to classify chemicals does so at their own risk.

Further Information

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