Class C Solutions Group
A business of MSC Industrial Supply Co.

Safety Data Sheet

acc. to 29 CFR 1910.1200 App D

HI TECH ELECTRONIC CLEANER

Version number: GHS 3.0
Replaces version of: 2016-02-19 (GHS 2)

Revision: 2016-04-26

SECTION 1: Identification

1.1 Product identifier

Trade name **HI TECH ELECTRONIC CLEANER**

1.2 Relevant identified uses of the substance or mixture and uses advised against

Relevant identified uses Cleaning agent

1.3 Manufacturer

ARTLUX S.A. DE C.V. (MEXICO)
Acceso II Calle 3 No. 5 Col. Zona Industrial Benito Juárez
MX-76120 Querétaro
Mexico

Telephone: +52-442-309-3200
Telefax: e-mail: rcuatepotzo@artlux.com.mx
Website:

Supplier (distributor)

Class C Solutions Group
a business of MSC Industrial Supply Co.
75 Maxess Road Melville, NY 11747-3151
1-866-438-6767.

e-mail (competent person) rcuatepotzo@artlux.com.mx (Rubén Cuatepotzo)

1.4 Emergency telephone number

+52-442-309-3200

Emergency information service This number is only available during the following office hours: Mon-Fri 09:00 - 17:00

SECTION 2: Hazard(s) identification

2.1 Classification of the substance or mixture

Classification acc. to OSHA "Hazard Communication Standard" (29 CFR 1910.1200)

Section	Hazard class	Category	Hazard class and category	Hazard statement
B.5	gases under pressure	C	Press. Gas C	H280
A.1D	acute toxicity (dermal)	4	Acute Tox. 4	H312

For full text of abbreviations: see SECTION 16.

The most important adverse physicochemical, human health and environmental effects
Contains gas under pressure; may explode if heated.

Additional information

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

2.2 Label elements

Labelling acc. to OSHA "Hazard Communication Standard" (29 CFR 1910.1200)

- Signal word: warning

- Pictograms

GHS04, GHS07

- Hazard statements

H280	Contains gas under pressure; may explode if heated.
H312	Harmful in contact with skin.

- Precautionary statements

P261	Avoid breathing gas/mist/vapors/spray.
P264	Wash hands thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P271	Use only outdoors or in a well-ventilated area.
P280	Wear protective gloves/eye protection/face protection.
P302+P352	IF ON SKIN: Wash with plenty of soap and water.
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P312	Call a POISON CENTER/doctor if you feel unwell.
P321	Specific treatment (see on this label).
P332+P313	If skin irritation occurs: Get medical advice/attention.
P337+P313	If eye irritation persists: Get medical advice/attention.
P362+P364	Take off contaminated clothing and wash it before reuse.
P403+P233	Store in a well-ventilated place. Keep container tightly closed.
P405	Store locked up.
P410+P403	Protect from sunlight. Store in a well-ventilated place.
P501	Dispose of contents/container to an authorized waste treatment facility.
P502	Refer to manufacturer/supplier for information on recovery/recycling.

- Hazardous ingredients for labelling: 1,1-Dichloro-1-Fluoroethane, carbon dioxide

2.3 Other hazards

of no significance

Hazards not otherwise classified

May be harmful if swallowed (GHS category 5: acutely toxic - oral).

Results of PBT and vPvB assessment

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

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SECTION 3: Composition/information on ingredients

3.1 Substances

Not relevant (mixture)

3.2 Mixtures

Description of the mixture

Name of substance	Identifier	Wt%	Hazard class and category	Classification acc. to GHS	Hazard statement	Pictograms
1,1-Dichloro-1-Fluoroethane	CAS No 1717-00-6	≥ 90	4.1C Aquatic Chronic 3	Aquatic Chronic 3 / H412	H412	
carbon dioxide	CAS No 124-38-9	10 - < 25	B.5 Press. Gas L	Press. Gas L / H280	H280	

For full text of abbreviations: see SECTION 16.

SECTION 4: First-aid measures

4.1 First-aid instructions

General notes

Do not leave affected person unattended. Remove victim out of the danger area. Keep affected person warm, still and covered. Take off immediately all contaminated clothing. In all cases of doubt, or when symptoms persist, seek medical advice. In case of unconsciousness place person in the recovery position. Never give anything by mouth.

Following inhalation

If breathing is irregular or stopped, immediately seek medical assistance and start first aid actions. Provide fresh air.

Following skin contact

Thaw frosted parts with lukewarm water. Do not rub affected area.

Following eye contact

Remove contact lenses, if present and easy to do. Continue rinsing. Irrigate copiously with clean, fresh water for at least 10 minutes, holding the eyelids apart.

Following ingestion

Rinse mouth with water (only if the person is conscious). Do NOT induce vomiting.

4.2 Most important symptoms and effects, both acute and delayed

Symptoms and effects are not known to date.

4.3 Indication of any immediate medical attention and special treatment needed

none

SECTION 5: Fire-fighting measures

5.1 Extinguishing media

Suitable extinguishing media

Water spray, BC-powder

Unsuitable extinguishing media

Water jet

5.2 Special hazards arising from the substance or mixture

Contact with the product can cause burns and/or frostbite. Contains gas under pressure; may explode if heated.

Hazardous combustion products

Nitrogen oxides (NOx), Carbon monoxide (CO), Carbon dioxide (CO2), Hydrogen chloride (HCl), Hydrogen halides (HX)

5.3 Advice for firefighters

In case of fire and/or explosion do not breathe fumes. Co-ordinate firefighting measures to the fire surroundings. Do not allow firefighting water to enter drains or water courses. Collect contaminated firefighting water separately. Fight fire with normal precautions from a reasonable distance.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

Remove persons to safety.

For emergency responders

Wear breathing apparatus if exposed to vapors/dust/aerosols/gases.

6.2 Environmental precautions

Keep away from drains, surface and ground water. Retain contaminated washing water and dispose it.

6.3 Methods and material for containment and cleaning up

Advices on how to contain a spill

Covering of drains

Other information relating to spills and releases

Place in appropriate containers for disposal. Ventilate affected area.

6.4 Reference to other sections

Hazardous combustion products: see section 5. Personal precautions: see section 8. Incompatible materials: see section 10. Disposal considerations: see section 13.

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SECTION 7: Handling and storage

7.1 Precautions for safe handling

Recommendations

- Measures to prevent fire as well as aerosol and dust generation

Use local and general ventilation. Use only in well-ventilated areas.

Advice on general occupational hygiene

Wash hands after use. Do not to eat, drink and smoke in work areas. Remove contaminated clothing and protective equipment before entering eating areas. Never keep food or drink in the vicinity of chemicals. Never place chemicals in containers that are normally used for food or drink. Keep away from food, drink and animal feedingstuffs.

7.2 Conditions for safe storage, including any incompatibilities

Managing of associated risks

- Flammability hazards

Protect from sunlight.

- Packaging compatibilities

Only packagings which are approved (e.g. acc. to the Dangerous Goods Regulations) may be used.

7.3 Specific end use(s)

See section 16 for a general overview.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limit values (Workplace Exposure Limits)

Country	Name of agent	CAS No	Identifier	TWA [ppm]	TWA [mg/m³]	STEL [ppm]	STEL [mg/m³]	Source	Conc.	Wt %
US	carbon dioxide	124-38-9	PEL	5,000	9,000			29 CFR OSHA	10 - < 25 % m	10 - < 25

Notation

STEL short-term exposure limit: a limit value above which exposure should not occur and which is related to a 15-minute period unless otherwise specified

TWA time-weighted average (long-term exposure limit): measured or calculated in relation to a reference period of 8 hours time-weighted average

8.2 Exposure controls

Appropriate engineering controls

General ventilation.

Individual protection measures (personal protective equipment)

Eye/face protection

Wear eye/face protection.

Skin protection

- Hand protection

In the case of wanting to use the gloves again, clean them before taking off and air them well.

- Other protection measures

Take recovery periods for skin regeneration. Preventive skin protection (barrier creams/ointments) is recommended. Wash hands thoroughly after handling.

Respiratory protection

During spraying wear suitable respiratory equipment.

Environmental exposure controls

Use appropriate container to avoid environmental contamination. Keep away from drains, surface and ground water.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance

Physical state	aerosol (spray aerosol)
Color	transparent
Odor	characteristic

Other safety parameters

pH (value)

Melting point/freezing point	-100 - 103.5 °C
Initial boiling point and boiling range	30 - 32 °C
Flash point	not determined
Evaporation rate	not determined

Flammability (solid, gas)

Explosive limits	not determined
Vapor pressure	76.3 Pa at 25 °C
Density	1.23 - 1.24 $^{g}/_{cm^3}$ at 25 °C
Vapor density	this information is not available
Solubility(ies)	not determined

Partition coefficient

- n-octanol/water (log KOW)	this information is not available
Auto-ignition temperature	not determined

Viscosity

- Dynamic viscosity	0 - 10 mPa s at 25 °C
Explosive properties	none
Oxidizing properties	none

9.2 Other information

Maximum VOC content limit 94 %

Compuestos orgánicos volátiles (VOC) - Presión de vapor ≥ 0.01 kPa (Propiedades Físicas y Químicas).

Propellant content	10 %

SECTION 10: Stability and reactivity

10.1 Reactivity

Concerning incompatibility: see below "Conditions to avoid" and "Incompatible materials". The mixture contains reactive substance(s). Gas under pressure.

If heated:

Danger of explosion, Gas under pressure, Danger of bursting container

10.2 Chemical stability

See below "Conditions to avoid".

10.3 Possibility of hazardous reactions

No known hazardous reactions.

10.4 Conditions to avoid

There are no specific conditions known which have to be avoided.

Hints to prevent fire or explosion

Protect from sunlight.

10.5 Incompatible materials

Oxidizers

10.6 Hazardous decomposition products

Reasonably anticipated hazardous decomposition products produced as a result of use, storage, spill and heating are not known. Hazardous combustion products: see section 5.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Test data are not available for the complete mixture.

Classification procedure

The method for classification of the mixture is based on ingredients of the mixture (additivity formula).

Classification acc. to OSHA "Hazard Communication Standard" (29 CFR 1910.1200)

Acute toxicity

May be harmful if swallowed. Harmful in contact with skin.

- Acute toxicity estimate (ATE)

Dermal	2,000

Skin corrosion/irritation

Shall not be classified as corrosive/irritant to skin.

Serious eye damage/eye irritation

Shall not be classified as seriously damaging to the eye or eye irritant.

Respiratory or skin sensitization

Shall not be classified as a respiratory or skin sensitizer.

Germ cell mutagenicity

Shall not be classified as germ cell mutagenic.

Carcinogenicity

Shall not be classified as carcinogenic.

Reproductive toxicity

Shall not be classified as a reproductive toxicant.

Specific target organ toxicity - single exposure

Shall not be classified as a specific target organ toxicant (single exposure).

Specific target organ toxicity - repeated exposure

Shall not be classified as a specific target organ toxicant (repeated exposure).

Aspiration hazard

Shall not be classified as presenting an aspiration hazard.

SECTION 12: Ecological information

12.1 Toxicity

Shall not be classified as hazardous to the aquatic environment.

Biodegradation

Not readily biodegradable.

12.2 Persistence and degradability

Data are not available.

12.3 Bioaccumulative potential
Data are not available.

12.4 Mobility in soil
Data are not available.

12.5 Results of PBT and vPvB assessment
Data are not available.

12.6 Other adverse effects

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Sewage disposal-relevant information

Do not empty into drains. Avoid release to the environment. Refer to special instructions/safety data sheets.

Waste treatment of containers/packages

Only packagings which are approved (e.g. acc. to DOT) may be used. Completely emptied packages can be recycled. Handle contaminated packages in the same way as the substance itself.

Relevant provisions relating to waste

List of wastes

Not assigned

Remarks

Please consider the relevant national or regional provisions. Waste shall be separated into the categories that can be handled separately by the local or national waste management facilities.

SECTION 14: Transport information

14.1	**UN number**	1950
14.2	**UN proper shipping name**	Aerosols
14.3	**Transport hazard class(es)**	
	Class	2.2 (gases) (aerosol)
14.4	**Packing group**	not assigned to a packing group
14.5	**Environmental hazards**	

14.6 Special precautions for user
There is no additional information.

14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code
The cargo is not intended to be carried in bulk.

14.8 Information for each of the UN Model Regulations

Transport of dangerous goods by road or rail (49 CFR US DOT)

Index number	1950
Proper shipping name	Aerosols
- Particulars in the shipper's declaration	UN1950, Aerosols, 2.2
Class	2.2
Danger label(s)	

ERG No	126

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations specific for the product in question

National regulations (United States)

Toxic Substance Control Act (TSCA) all ingredients are listed

SARA TITLE III (Superfund Amendment and Reauthorization Act)

- List of Extremely Hazardous Substances (40 CFR 355) (EPCRA Section 302 and 304)
none of the ingredients are listed

New Jersey Worker and Community Right to Know Act N.J.S.A. 34:5A-1 et. seq.

Right to Know Hazardous Substance List

Name acc. to inventory	CAS No	Remarks	Classifications
carbon dioxide	124-38-9		

California Environmental Protection Agency (Cal/EPA): Proposition 65 Chemicals known to the State to cause cancer or reproductive toxicity none of the ingredients are listed

Proposition 65 List of chemicals

Name acc. to inventory	CAS No	Remarks	Type of the toxicity

Industry or sector specific available guidance(s)

NPCA-HMIS® III

Hazardous Materials Identification System. American Coatings Association.

Category	Rating	Description
Chronic	/	none
Health	1	Irritation or minor reversible injury possible
Flammability	1	material that must be preheated before ignition can occur
Physical hazard	0	material that is normally stable, even under fire conditions, and will not react with water, polymerize, decompose, condense, or self-react. Non-explosive
Personal protective equipment	-	

NFPA® 704

National Fire Protection Association: Standard System for the Identification of the Hazards of Materials for Emergency Response (United States).

Category	Degree of hazard	Description
Flammability	1	material that must be preheated before ignition can occur
Health	2	material that, under emergency conditions, can cause temporary incapacitation or residual injury
Instability	0	material that is normally stable, even under fire conditions
Special hazard		

15.2 Chemical Safety Assessment

Chemical safety assessments for substances in this mixture were not carried out.

SECTION 16: Other information, including date of preparation or last revision

Indication of changes (revised safety data sheet)

Section	Former entry (text/value)	Actual entry (text/value)	Safety-relev-ant
2.1		Additional information: This mixture does not contain any substances that are assessed to be a PBT or a vPvB.	yes
2.3		Hazards not otherwise classified: change in the listing (table)	yes
2.3		Results of PBT and vPvB assessment: This mixture does not contain any substances that are assessed to be a PBT or a vPvB.	yes
3.2		Description of the mixture: change in the listing (table)	yes
5.1	Suitable extinguishing media: Water spray, BC-powder, Carbon dioxide (CO2)	Suitable extinguishing media: Water spray, BC-powder	yes
6.3	Advices on how to clean up a spill: Wipe up with absorbent material (e.g. cloth, fleece). Collect spillage: Sawdust, Kieselgur (di-atomite), Sand, Universal binder		yes

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Section	Former entry (text/value)	Actual entry (text/value)	Safety-relevant
6.3	Appropriate containment techniques: Use of adsorbent materials.		yes
8.1		Control parameters: change in the listing (table)	yes
8.2	Hand protection: Wear suitable gloves. Chemical protection gloves are suitable, which are tested according to EN 374. Check leak-tightness/impermeability prior to use. In the case of wanting to use the gloves again, clean them before taking off and air them well. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.	Hand protection: In the case of wanting to use the gloves again, clean them before taking off and air them well.	yes
8.2	Respiratory protection: In case of inadequate ventilation wear respiratory protection.	Respiratory protection: During spraying wear suitable respiratory equipment.	yes
9.1	Physical state: liquid	Physical state: aerosol (spray aerosol)	yes
9.1	pH (value): not determined		yes
9.1	Flammability (solid, gas): not relevant (fluid)		yes
9.2		Propellant content: 10 %	yes
10.4		Hints to prevent fire or explosion: Protect from sunlight.	yes
12.1	Toxicity: May cause long lasting harmful effects to aquatic life.	Toxicity: Shall not be classified as hazardous to the aquatic environment.	yes
14.1	UN number: 3169	UN number: 1950	yes
14.2	UN proper shipping name: Gas sample, non-pressurized, toxic, n.o.s.	UN proper shipping name: Aerosols	yes
14.3	Class: 2.3 (gases) (toxic)	Class: 2.2 (gases) (aerosol)	yes
14.8	Index number: 3169	Index number: 1950	yes
14.8	Proper shipping name: Gas sample, non-pressurized, toxic, n.o.s.	Proper shipping name: Aerosols	yes
14.8	Particulars in the shipper's declaration: UN3169, Gas sample, non-pressurized, toxic, n.o.s., 2.3	Particulars in the shipper's declaration: UN1950, Aerosols, 2.2	yes
14.8	Class: 2.3	Class: 2.2	yes
14.8		Danger label(s): change in the listing (table)	yes

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Section	Former entry (text/value)	Actual entry (text/value)	Safety-relev-ant
14.8	ERG No: 123	ERG No: 126	yes
14.8	UN number: 3169		yes
14.8	Proper shipping name: GAS SAMPLE, NONPRESSURIZED, TOXIC, N.O.S.		yes
14.8	Class: 2.3		yes
14.8	Danger label(s): 2.3		yes
14.8		ERG No: change in the listing (table)	yes
14.8	Special provisions (SP): 209		yes
14.8	Excepted quantities (EQ): E0		yes
14.8	Limited quantities (LQ): -		yes
14.8	EmS: F-C, S-U		yes
14.8	Stowage category: D		yes
14.8	UN number: 3169		yes
14.8	Proper shipping name: Gas sample, non-pressurized, toxic, n.o.s.		yes
14.8	Class: 2.3		yes
14.8	Danger label(s): 2.3		yes
14.8		ERG No: change in the listing (table)	yes
14.8	Special provisions (SP): A1		yes
14.8	Excepted quantities (EQ): E0		yes
15.1		Toxic Substance Control Act (TSCA): all ingredients are listed	yes
15.1		New Jersey Worker and Community Right to Know Act N.J.S.A. 34:5A-1 et. seq. change in the listing (table)	yes

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Abbreviations and acronyms

Abbr.	Descriptions of used abbreviations
29 CFR OSHA	29 CFR §1910.1001 - Occupational Safety and Health Standards: Toxic and Hazardous Substances (permissible exposure limits)
49 CFR US DOT	49 CFR § 40 U.S. Department of Transportation
Aquatic Chronic	hazardous to the aquatic environment - chronic hazard
CAS	Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances)
DGR	Dangerous Goods Regulations (see IATA/DGR)
DOT	Department of Transportation (USA)
ERG No	Emergency Response Guidebook - Number
GHS	"Globally Harmonized System of Classification and Labelling of Chemicals" developed by the United Nations
IATA	International Air Transport Association
IATA/DGR	Dangerous Goods Regulations (DGR) for the air transport (IATA)
IMDG	International Maritime Dangerous Goods Code
MARPOL	International Convention for the Prevention of Pollution from Ships (abbr. of "Marine Pollutant)
NPCA-HMIS® III	National Paint and Coatings Association: Hazardous Materials Identification System - HMIS® III, Third Edition
OSHA	Occupational Safety and Health Administration (United States)
PBT	Persistent, Bioaccumulative and Toxic
PEL	permissible exposure limit
ppm	parts per million
Press. Gas	gas under pressure
RTECS	Registry of Toxic Effects of Chemical Substances (database of NIOSH with toxicological information)
STEL	short-term exposure limit
TWA	time-weighted average
VOC	Volatile Organic Compounds
vPvB	very Persistent and very Bioaccumulative

Key literature references and sources for data

OSHA Hazard Communication Standard (HCS), 29 CFR 1910.1200.

Transport of dangerous goods by road or rail (49 CFR US DOT). International Maritime Dangerous Goods Code (IMDG). Dangerous Goods Regulations (DGR) for the air transport (IATA).

Classification procedure

Physical and chemical properties. The classification is based on tested mixture. Health hazards. Environmental hazards. The method for classification of the mixture is based on ingredients of the mixture (additivity formula).

List of relevant phrases (code and full text as stated in chapter 2 and 3)

Code	Text
H280	contains gas under pressure; may explode if heated
H312	harmful in contact with skin
H412	harmful to aquatic life with long lasting effects

Disclaimer

This information is based upon the present state of our knowledge. This SDS has been compiled and is solely intended for this product.