SAFETY DATA SHEET



Electro-Wash® CZ

Section 1. Identification

GHS product identifier : Electro-Wash® CZ

Product code : ES7100 Other means of : ES7100

identification ES7100 (NSN 6850-01-436-4584)

Degreasers

Industrial/Professional use

Product type : Aerosol.

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

Identified uses

Industrial/Professional use Degreasers

Uses advised against

Not applicable.

Supplier's details : Chemtronics

8125 Cobb Center Drive Kennesaw, GA 30152

Tel. 770-424-4888 or toll free 800-645-5244

Emergency telephone number (with hours of

operation)

: Chemtrec - 1-800-424-9300 or collect 703-527-3887

24/7

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

: GASES UNDER PRESSURE Compressed gas

GHS label elements

Hazard pictograms :



Signal word : Warning

Hazard statements : Contains gas under pressure. May explode when heated.

Precautionary statements

Prevention : Not applicable
Response : Not applicable

Storage : Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F. Store in

a well-ventilated place.

Disposal : Dispose of contents and container in accordance with all local, regional, national and

international regulations.

Hazards not otherwise

classified

: None known.

Section 3. Composition/information on ingredients

Substance/mixture

: Mixture

Other means of identification

ES7100 ES7100 (NSN 6850-01-436-4584)

Degreasers

Industrial/Professional use

Ingredient name	%	CAS number
trans-dichloroethylene	<10	156-60-5
methylcyclohexane	≤5	108-87-2

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 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

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.

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. 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.

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 shoes thoroughly before reuse.

Ingestion

: Wash out mouth with water. Remove dentures if any. 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 a collar, tie, belt or waistband.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact

: May cause eye irritation.

Inhalation

: Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.

Skin contact

: May cause skin irritation.

Ingestion

: Do not ingest. If swallowed then seek immediate medical assistance.

Over-exposure signs/symptoms

Eye contact

: Adverse symptoms may include the following: pain or irritation

watering redness

Date of issue/Date of revision : 9/27/2023 Date of previous issue : 9/27/2023 Version : 4 2/12

Section 4. First aid measures

Inhalation : Adverse symptoms may include the following:

respiratory tract irritation

coughing

Skin contact: Adverse symptoms may include the following:

irritation redness

Ingestion: Adverse symptoms may include the following:

Ingestion Seek medical attention.

Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician : 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.

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

: None known.

Unsuitable extinguishing media

Specific hazards arising from the chemical

Hazardous thermal decomposition products

: In a fire or if heated, a pressure increase will occur and the container may burst. Bursting aerosol containers may be propelled from a fire at high speed.

: Decomposition products may include the following materials:

: Use an extinguishing agent suitable for the surrounding fire.

carbon dioxide carbon monoxide

halogenated compounds

carbonyl halides

Special protective actions for fire-fighters

: 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 for fire-fighters

: Fire-fighters 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 or 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".

Date of issue/Date of revision : 9/27/2023 Date of previous issue : 9/27/2023 Version : 4 3/12

Section 6. Accidental release measures

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).

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. Alternatively, 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). Pressurized 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 areas 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.

including any incompatibilities

Conditions for safe storage, : 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. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
trans-dichloroethylene	ACGIH TLV (United States, 3/2020). TWA: 200 ppm 8 hours. TWA: 793 mg/m³ 8 hours.
methylcyclohexane	ACGIH TLV (United States, 3/2020). TWA: 1610 mg/m³ 8 hours. TWA: 400 ppm 8 hours. NIOSH REL (United States, 10/2016). TWA: 1600 mg/m³ 10 hours. TWA: 400 ppm 10 hours. OSHA PEL (United States, 5/2018). TWA: 2000 mg/m³ 8 hours. TWA: 500 ppm 8 hours. OSHA PEL 1989 (United States, 3/1989). TWA: 1600 mg/m³ 8 hours. TWA: 400 ppm 8 hours.

Biological exposure indices

Date of issue/Date of revision : 9/27/2023 : 9/27/2023 Date of previous issue Version: 4

Section 8. Exposure controls/personal protection

No exposure indices known.

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.

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: chemical splash goggles.

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.

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

: Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

Section 9. Physical and chemical properties and safety characteristics

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

Appearance

Physical state : Liquid. [Aerosol.]
Color : Clear. Colorless.

Odor : Ethereal.

Odor threshold : Not available.

pH : Not available.

Melting point/freezing point : Not available.

Boiling point, initial boiling : 32°C (89.6°F)

point, and boiling range

Flash point : Not applicable.

Evaporation rate : >1 (butyl acetate = 1)

Date of issue/Date of revision : 9/27/2023 Date of previous issue : 9/27/2023 Version : 4 5/12

Section 9. Physical and chemical properties and safety characteristics

Flammability : Not available.

limit/flammability limit

Lower and upper explosion : Not available.

: 29.3 kPa (220 mm Hg) Vapor pressure

Relative vapor density : Not available.

: 1.53 Relative density

: Not available. Solubility in water Partition coefficient: n-: Not applicable.

octanol/water

Auto-ignition temperature : Not available. **Decomposition temperature** : Not available. **Heat of combustion** : 1.05 kJ/g : Not available. **Viscosity**

Particle characteristics

Median particle size : Not applicable.

Aerosol product

Type of aerosol : Spray **Ignition distance** : 0 cm **Enclosed space ignition -**: 380 s/m³

Time equivalent

Enclosed space ignition -: 977 g/m³

Deflagration density

Section 10. Stability and reactivity

: No specific test data related to reactivity available for this product or its ingredients. Reactivity

Chemical stability : The product is stable.

Possibility of hazardous reactions

: Under normal conditions of storage and use, hazardous reactions will not occur.

Conditions to avoid : Avoid all possible sources of ignition (spark or flame).

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

Product/ingredient name	Result	Species	Dose	Exposure
trans-dichloroethylene	LC50 Inhalation Gas. LD50 Dermal	Rat Rabbit	24100 ppm >5 g/kg	4 hours

Irritation/Corrosion

Section 11. Toxicological information

Product/ingredient name	Result	Species	Score	Exposure	Observation
trans-dichloroethylene	Eyes - Moderate irritant	Rabbit	-	10 mg	-
-	Skin - Mild irritant	Rabbit	-	500 mg	-
methylcyclohexane	Eyes - Mild irritant	Rabbit	-	24 hours 100	-
				uL	
	Skin - Mild irritant	Rabbit	-	24 hours 500	-
				uL	

Sensitization

Not available.

Mutagenicity

Not available.

Carcinogenicity

Not available.

Reproductive toxicity

Not available.

Teratogenicity

Not available.

Specific target organ toxicity (single exposure)

Not available.

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

Information on the likely

routes of exposure

: Not available.

Potential acute health effects

Eye contact : May cause eye irritation.

Inhalation : Exposure to decomposition products may cause a health hazard. Serious effects may

be delayed following exposure.

Skin contact : May cause skin irritation.

Ingestion: Do not ingest. If swallowed then seek immediate medical assistance.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : Adverse symptoms may include the following:

pain or irritation watering redness

Inhalation : Adverse symptoms may include the following:

respiratory tract irritation

coughing

Skin contact: Adverse symptoms may include the following:

irritation redness

Ingestion : Adverse symptoms may include the following:

Ingestion Seek medical attention.

<u>Delayed and immediate effects and also chronic effects from short and long term exposure</u> <u>Short term exposure</u>

Date of issue/Date of revision : 9/27/2023 Date of previous issue : 9/27/2023 Version : 4 7/12

Section 11. Toxicological information

Potential immediate

effects

: Not available.

Potential delayed effects

: Not available.

Long term exposure

Potential immediate

: Not available.

effects

Potential delayed effects : Not available.

Potential chronic health effects

Not available.

General : No known significant effects or critical hazards.
 Carcinogenicity : No known significant effects or critical hazards.
 Mutagenicity : No known significant effects or critical hazards.
 Reproductive toxicity : No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Product/ingredient name	(3	(mg/kg)	(3 /	Inhalation (vapors) (mg/l)	Inhalation (dusts and mists) (mg/ I)
trans-dichloroethylene	1235	N/A	24100	N/A	N/A

Section 12. Ecological information

Toxicity

Product/ingredient name	Result	Species	Exposure
trans-dichloroethylene	Acute LC50 220000 µg/l Fresh water Acute LC50 4200 mg/l Fresh water	Daphnia - <i>Daphnia magna</i> Fish - <i>Rasbora heteromorpha</i>	48 hours 96 hours
methylcyclohexane	Acute LC50 5800 μg/l Marine water	Fish - <i>Morone saxatilis</i> - Juvenile (Fledgling, Hatchling, Weanling)	96 hours

Persistence and degradability

Not available.

Bioaccumulative potential

Product/ingredient name	LogPow	BCF	Potential
trans-dichloroethylene	2.09	-	Low
methylcyclohexane	3.61	186.21	Low

Mobility in soil

Soil/water partition coefficient (Koc)

: Not available.

Other adverse effects : No known significant effects or critical hazards.

Date of issue/Date of revision : 9/27/2023 Date of previous issue : 9/27/2023 Version : 4 8/12

Section 13. Disposal considerations

Disposal methods

: The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose 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.

United States - RCRA Toxic hazardous waste "U" List

Ingredient	CAS#	Status	Reference number
1,2-Dichloroethylene; Ethene, 1,2-dichloro-, (E)-	156-60-5	Listed	U079

Section 14. Transport information

	DOT Classification	TDG Classification	Mexico Classification	IMDG	IATA
UN number	UN1950	UN1950	UN1950	UN1950	UN1950
UN proper shipping name	AEROSOLS	AEROSOLS	AEROSOLS	AEROSOLS	Aerosols, non- flammable (norflurane)
Transport hazard class(es)	2.2	2.2	2.2	2.2	2.2
Packing group	-	-	-	-	-
Environmental hazards	No.	No.	No.	No.	No.

Additional information

DOT Classification

: Reportable quantity 18181.8 lbs / 8254.5 kg [1425.2 gal / 5395.1 L]. Package sizes shipped in quantities less than the product reportable quantity are not subject to the RQ (reportable quantity) transportation requirements.

TDG Classification

: Product classified as per the following sections of the Transportation of Dangerous Goods Regulations: 2.13-2.17 (Class 2).

IATA

Quantity limitation Passenger and Cargo Aircraft: 75 kg. Cargo Aircraft Only: 150 kg. Limited Quantities - Passenger Aircraft: 30 kg.

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.

Transport in bulk according: Not available. to IMO instruments

Date of issue/Date of revision : 9/27/2023 : 9/27/2023 9/12 Date of previous issue Version: 4

Section 15. Regulatory information

U.S. Federal regulations

: TSCA 8(a) PAIR: methylcyclohexane

TSCA 8(a) CDR Exempt/Partial exemption: Not determined

Clean Water Act (CWA) 307: trans-dichloroethylene

Clean Air Act Section 112

(b) Hazardous Air **Pollutants (HAPs)** : Listed

Clean Air Act Section 602

Class I Substances

: Not listed

Clean Air Act Section 602

Class II Substances

: Not listed

DEA List I Chemicals (Precursor Chemicals) : Not listed

DEA List II Chemicals (Essential Chemicals) : Not listed

SARA 302/304

Composition/information on ingredients

No products were found.

SARA 304 RQ : Not applicable.

SARA 311/312

Classification : Sudden release of pressure

Composition/information on ingredients

Name	%	Classification
norflurane	≥25 - ≤50	GASES UNDER PRESSURE - Compressed gas
trans-dichloroethylene	<10	FLAMMABLE LIQUIDS - Category 2
		ACUTE TOXICITY (oral) - Category 4
		SKIN IRRITATION - Category 2
		EYE IRRITATION - Category 2A
methylcyclohexane	≤5	FLAMMABLE LIQUIDS - Category 2
		EYE IRRITATION - Category 2B

State regulations

Massachusetts : The following components are listed: DICHLOROETHYLENE-TRANS;

METHYLCYCLOHEXANE

: The following components are listed: Ethene, trans-1,2-dichloro-; Dichloroethylene **New York**

New Jersey : The following components are listed: FLUORIDES; METHYLCYCLOHEXANE;

CYCLOHEXANE, METHYL-; METHYL ALCOHOL

Pennsylvania The following components are listed: ETHENE, 1,2-DICHLORO-, (E)-; CYCLOHEXANE,

METHYL-

California Prop. 65

MARNING: This product can expose you to Methanol, which is known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

		Maximum acceptable dosage level
Methanol	-	Yes.

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol

: 9/27/2023 Date of issue/Date of revision : 9/27/2023 10/12 Date of previous issue Version

Section 15. Regulatory information

Ingredient name	Status
HFC-134a	Annex F, Group I

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Rotterdam Convention on Prior Informed Consent (PIC)

Not listed

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

Inventory list

Australia : All components are listed or exempted.

Canada : All components are listed or exempted.

China : All components are listed or exempted.

Eurasian Economic Union: Russian Federation inventory: Not determined.

Japan : Japan inventory (CSCL): Not determined.

Japan inventory (ISHL): Not determined.

New Zealand : All components are listed or exempted.
Philippines : All components are listed or exempted.

Republic of Korea : Not determined.

Taiwan : All components are listed or exempted.

Thailand : Not determined.

Turkey : Not determined.

United States: All components are active or exempted.Viet Nam: All components are listed or exempted.

Section 16. Other information

Hazardous Material Information System (U.S.A.)



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 and the associated label are not required on SDSs or products leaving a facility 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 trademark and service mark of the American Coatings Association, Inc.

The customer is responsible for determining the PPE code for this material. For more information on HMIS® Personal Protective Equipment (PPE) codes, consult the HMIS® Implementation Manual.

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



Procedure used to derive the classification

Classification	Justification
GASES UNDER PRESSURE Compressed gas	On basis of test data

History

Section 16. Other information

Date of printing : 9/27/2023 Date of issue/Date of : 9/27/2023

revision

Date of previous issue : 9/27/2023

Version : 4

Key to abbreviations : ATE = Acute Toxicity Estimate

BCF = Bioconcentration Factor

GHS = Globally Harmonized System of Classification and Labelling of Chemicals

IATA = International Air Transport Association

IBC = Intermediate Bulk Container

IMDG = International Maritime Dangerous Goods

LogPow = logarithm of the octanol/water partition coefficient

MARPOL = International Convention for the Prevention of Pollution From Ships, 1973

as modified by the Protocol of 1978. ("Marpol" = marine pollution)

N/A = Not available SGG = Segregation Group UN = United Nations

References: Not available.

Indicates information that has changed from previously issued version.

Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

Date of issue/Date of revision : 9/27/2023 Date of previous issue : 9/27/2023 Version : 4 12/12