

Safety Data Sheet

according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), and GHS

· **1.1 Product identifier: 13265**

- · Trade name: Endust® For Electronics (2x 7Oz)

· **Article number:** 13265

· **CAS Number:**

75-37-6

· **EC number:**

200-866-1

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

No further relevant information available.

- · **Application of the substance / the mixture** Surface cleaning

· **1.3 Details of the supplier of the Safety Data Sheet**

- · **Manufacturer/Supplier:**

Norazza, Inc. 3938 Broadway

Buffalo, NY 14227

Phone: (716) 706-1160

Website: www.norazza.com

· **1.4 Emergency telephone number:**

ChemTel Inc.

(800)255-3924, +1 (813)248-0585

2 Hazards identification

· **2.1 Classification of the substance or mixture**

Press. Gas H280 Contains gas under pressure; may explode if heated.

· **Classification according to Regulation (EC) No 1272/2008**

flame

Flam. Aerosol 1 H222-H229 Extremely flammable aerosol. Pressurized container: May burst if heated.

· **Classification according to Directive 67/548/EEC or Directive 1999/45/EC**

Not applicable.

F+; Extremely flammable R12: Extremely flammable.

· **Information concerning particular hazards for human and environment:**

Warning! Pressurized container. Asphyxiant gas.

· **2.2 Label elements**

- · **Labelling according to Regulation (EC) No 1272/2008**

The substance is classified and labelled according to the CLP regulation.

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Trade name: Endust® For Electronics 7Oz

- **Hazard pictograms**

GHS02

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- **Signal word** Danger

Hazard statements

H280 Contains gas under pressure; may explode if heated.

H222-H229 Extremely flammable aerosol. Pressurized container: May burst if heated.

Precautionary statements

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P251 Do not pierce or burn, even after use.

P211 Do not spray on an open flame or other ignition source.

P410+P412 Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F.

Hazard description:

- **WHMIS-symbols:**

B5 - Flammable aerosol

NFPA ratings (scale 0 - 4)

Health = 0

Fire = 4

3 Reactivity = 3

HMIS-ratings (scale 0 - 4)

0 Health = 0

4 Fire = 4

REACTIVITY 3

Reactivity = 3

· **HMIS Long Term Health Hazard Substances**

Substance is not listed.

· **2.3 Other hazards**

- · **Results of PBT and vPvB assessment**
- · **PBT:** Not applicable.
- · **vPvB:** Not applicable.

3 Composition/information on ingredients

· **3.1 Substances**

- · **CAS No. Description**

75-37-6 1,1-difluoroethane

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Trade name: Endust® For Electronics 7Oz

· Identification number(s)

· EC number: 200-866-1

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4 First aid measures

· 4.1 Description of first aid measures

- **General information:** Take affected persons out into the fresh air.

· After inhalation:

Supply fresh air; consult doctor in case of complaints.

Provide oxygen treatment if affected person has difficulty breathing.

In case of irregular breathing or respiratory arrest provide artificial respiration.

· After skin contact:

In cases of frost bites, rinse with plenty of water. Do not remove clothing. If skin irritation continues, consult a doctor.

Seek immediate medical help for blistering or open wounds.

· After eye contact:

Remove contact lenses if worn.

Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.

· After swallowing:

Unlikely route of exposure.

Do not induce vomiting; call for medical help immediately.

· 4.2 Most important symptoms and effects, both acute and delayed

Headache Coughing Dizziness Disorientation

- **Hazards** Danger of impaired breathing.

· **4.3 Indication of any immediate medical attention and special treatment needed**

Treat frost-bitten areas appropriately.

If necessary oxygen respiration treatment.

5 Firefighting measures

· **5.1 Extinguishing media**

- **· Suitable extinguishing agents:**

CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

- **For safety reasons unsuitable extinguishing agents:** None.

- **· 5.2 Special hazards arising from the substance or mixture**

Danger of receptacles bursting because of high vapor pressure when heated. During heating or in case of fire poisonous gases are produced.

· **5.3 Advice for firefighters**

- **· Protective equipment:**

Wear self-contained respiratory protective device. Wear fully protective suit.

· **Additional information**

Cool endangered receptacles with water fog or haze.

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Leaking gas fire: Do not extinguish, unless leak can be stopped safely.

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6 Accidental release measures

· 6.1 Personal precautions, protective equipment and emergency procedures

Use respiratory protective device against the effects of fumes/dust/aerosol. Wear protective equipment. Keep unprotected persons away.

Ensure adequate ventilation

Keep away from ignition sources. Protect from heat.

- · **6.2 Environmental precautions:** No special measures required.
- · **6.3 Methods and material for containment and cleaning up:** Allow to evaporate.

· 6.4 Reference to other sections

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment. See Section 13 for disposal information.

7 Handling and storage

· 7.1 Precautions for safe handling

Avoid splashes or spray in enclosed areas. Use only in well ventilated areas.

Keep away from heat and direct sunlight.

· Information about fire - and explosion protection:

Do not spray onto a naked flame or any incandescent material. Keep ignition sources away - Do not smoke.

Protect against electrostatic charges.

Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50 °C, i.e. electric lights. Do not pierce or burn, even after use.

Emergency cooling must be available in case of nearby fire. Prevent impact and friction.

Flammable gas-air mixtures may form in empty receptacles.

· **7.2 Conditions for safe storage, including any incompatibilities**

- · **Storage:**
- · **Requirements to be met by storerooms and receptacles:**

Store in a cool location.

Observe official regulations on storing packaging with pressurized containers. Avoid storage near extreme heat, ignition sources or open flame.

- · **Information about storage in one common storage facility:** Store away from oxidizing agents.

· **Further information about storage conditions:**

Protect from heat and direct sunlight.

Store in a cool place. Heat will increase pressure and may lead to the receptacle bursting.

- · **7.3 Specific end use(s)** No further relevant information available.

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Trade name: Endust® For Electronics 70z

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8 Exposure controls/personal protection

- **Additional information about design of technical facilities:** No further data; see item 7.

· 8.1 Control parameters

- **Ingredients with limit values that require monitoring at the workplace:** Not required.
- **DNELs** No further relevant information available.
- **PNECs** No further relevant information available.
- **Additional information:** The lists valid during the making were used as basis.

· 8.2 Exposure controls

- **Personal protective equipment:**
- **General protective and hygienic measures:**

The usual precautionary measures are to be adhered to when handling chemicals. Wash hands before breaks and at the end of work.

Do not inhale gases / fumes / aerosols.

· Respiratory protection:

Use suitable respiratory protective device in case of insufficient ventilation. For spills, respiratory protection may be advisable.

· Protection of hands:

Gloves not required under normal conditions of use.

Wear protective gloves to handle contents of damaged or leaking units. Gloves should provide protection from freezing temperatures.

· Penetration time of glove material

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

· Eye protection:

Safety glasses

· Body protection:

Not required under normal conditions of use. Protection may be required for spills.

· Limitation and supervision of exposure into the environment

No further relevant information available.

· **Risk management measures**

See Section 7 for additional information. No further relevant information available.

9 Physical and chemical properties

· **9.1 Information on basic physical and chemical properties**

- · **General Information**
- · **Appearance:**

Form: Aerosol

Color: Colorless

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Trade name: Endust® For Electronics 7Oz

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- **Odor:** Ether-like
- **Odor threshold:** Not determined.

- **pH-value:** Not determined.

- **Change in condition**

Melting point/Melting range: -153 °F/ -117 °C (Literature)

Boiling point/Boiling range: -13 °F / -25 °C

- **Flash point:** -58 °F / -50 °C

- **Flammability (solid, gaseous):** Not applicable.

- **Ignition temperature:** Not determined.

- **Decomposition temperature:** Not determined.

- **Self-igniting:** Not determined.

- **Danger of explosion:** Product is not explosive. However, formation of explosive air/

vapour mixtures are possible.

- **Explosion limits:**

Lower: 3,9 Vol %

Upper: 16,9 Vol %

- **Vapor pressure at 20 °C:** 530 kPa (62.5 psig)

- **Density at 20 °C:** 0,909 g/cm³
- **Relative density** Not determined.
- **Vapor density at 25 °C** 2,4 (AIR = 1)
- **Evaporation rate at 20 °C** >1 (Butyl acetate = 1)

- **Solubility in / Miscibility with**

water at 20 °C: <5,0 g/l (Negligible)

- **Partition coefficient (n-octanol/water):** Not determined.
- **Viscosity:**

Dynamic: Not determined.

Kinematic: Not determined.

- **9.2 Other information** No further relevant information available.

10 Stability and reactivity

10.1 Reactivity

- **10.2 Chemical stability**
- **Thermal decomposition / conditions to be avoided:**

No decomposition if used and stored according to specifications.

10.3 Possibility of hazardous reactions

Flammable.

Danger of receptacles bursting because of high vapor pressure when heated.

Can form explosive mixtures in air if heated above flash point and/or when sprayed or atomized.

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Trade name: Endust® For Electronics 70z

Can react violently with oxygen rich (oxidizing) material. Danger of Explosion.

Used empty containers may contain product gases which form explosive mixtures with air. Toxic fumes may be released if heated above the decomposition point.

· 10.4 Conditions to avoid

Keep ignition sources away - Do not smoke. Store away from oxidizing agents.

- · **10.5 Incompatible materials:** No further relevant information available.

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- · **10.6 Hazardous decomposition products:** Danger of toxic fluorine based pyrolysis products.

11 Toxicological information

· 11.1 Information on toxicological effects

- · **Acute toxicity:**
- · **LD/LC50 values relevant for classification:**

75-37-6 1,1-difluoroethane

Inhalative

LC50/4h 977 mg/l (mouse)

- · **Primary irritant effect:**
- · **on the skin:** No irritant effect.
- · **on the eye:** No irritating effect.
- · **Sensitization:** No sensitizing effects known.
- · **Additional toxicological information:** Asphyxiant gas.

12 Ecological information

· 12.1 Toxicity

- · **Aquatic toxicity:** No further relevant information available.
- · **12.2 Persistence and degradability** No further relevant information available.
- · **12.3 Bioaccumulative potential** Does not accumulate in organisms.
- · **12.4 Mobility in soil** No further relevant information available.

· **Additional ecological information:**

- **General notes:** Generally not hazardous for water

• **12.5 Results of PBT and vPvB assessment**

- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **12.6 Other adverse effects** No further relevant information available.

13 Disposal considerations

• **13.1 Waste treatment methods**

- **Recommendation**

Can be burned with household garbage after consulting with the waste disposal facility operator and the pertinent authorities and adhering to the necessary technical regulations.

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· **Uncleansed packaging:**

- · **Recommendation:** Disposal must be made according to official regulations.

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14 Transport information

- · **14.1 UN-Number**
- · **DOT, ADR, IMDG, IATA** UN1950
- · **14.2 UN proper shipping name**
- · **DOT** Aerosols, flammable
- · **ADR** 1950 AEROSOLS. FLAMMABLE
- · **IMDG, IATA** AEROSOLS, FLAMMABLE
- · **14.3 Transport hazard class(es)**
- · **DOT**
- · **Class** 2.1
- · **Label** 2.1
- · **ADR**
- · **Class** 2.1 5F
- · **Label** 2.1
- · **IMDG, IATA**
- · **Class** 2.1
- · **Label** 2.1




- **· 14.4 Packing group**
- **· DOT, ADR, IMDG, IATA** Not Regulated
- **· 14.5 Environmental hazards:**
- **· Marine pollutant:** No
- **· 14.6 Special precautions for user** Not applicable.
- **· Danger code (Kemler):** 20
- **· EMS Number:** F-D,S-U

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- **14.7 Transport in bulk according to Annex II of**

MARPOL73/78 and the IBC Code

Not applicable.

- **Transport/Additional information:**
- **ADR**

- **Limited quantities (LQ)**

1L

- **UN "Model Regulation":**

UN1950, AEROSOLS, FLAMMABLE, 2.1

- **15 Regulatory information**

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **United States (USA)**
- **SARA**
- **Section 355 (extremely hazardous substances):**

Substance is not listed.

- **Section 313 (Specific toxic chemical listings):**

Substance is not listed.

- **TSCA (Toxic Substances Control Act):**

Substance is listed.

- **Proposition 65 (California):**
- **Chemicals known to cause cancer:**

Substance is not listed.

- **Chemicals known to cause reproductive toxicity for females:**

Substance is not listed.

- **Chemicals known to cause reproductive toxicity for males:**

Substance is not listed.

- **Chemicals known to cause developmental toxicity:**

Substance is not listed.

- **Carcinogenic Categories**
- **EPA (Environmental Protection Agency)**

Substance is not listed.

- **IARC (International Agency for Research on Cancer)**

Substance is not listed.

- **TLV (Threshold Limit Value established by ACGIH)**

Substance is not listed.

- **NIOSH-Ca (National Institute for Occupational Safety and Health)**

Substance is not listed.

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- **OSHA-Ca (Occupational Safety & Health Administration)**

Substance is not listed.

• Canada

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- **Canadian Domestic Substances List (DSL)**

Substance is listed.

- **Canadian Ingredient Disclosure list (limit 0.1%)**

Substance is not listed.

- **Canadian Ingredient Disclosure list (limit 1%)**

Substance is not listed.

- **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

• Abbreviations and acronyms:

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods DOT: US Department of Transportation

IATA: International Air Transport Association

GHS: Globally Harmonized System of Classification and Labelling of Chemicals ACGIH: American Conference of Governmental Industrial Hygienists

EINECS: European Inventory of Existing Commercial Chemical Substances CAS: Chemical Abstracts Service (division of the American Chemical Society) NFPA: National Fire Protection Association (USA)

HMS: Hazardous Materials Identification System (USA)

WHMIS: Workplace Hazardous Materials Information System (Canada) DNEL: Derived No-Effect Level (REACH)

PNEC: Predicted No-Effect Concentration (REACH) LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

· **Sources**

SDS Prepared by: ChemTel Inc.

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