

# TECHNI-TOOL DUSTER 134A 10 OZ.

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Revision date: 09/04/2014

Version:

### SECTION 1: Identification of the substance/mixture and of the company/undertaking

#### 1.1. Product identifier

Product form : Substance  
 Trade name : TECHNI-TOOL DUSTER 134A 10 OZ.  
 CAS No : 811-97-2  
 Product code : 7580Z134  
 Formula : C2H2F4  
 Synonyms : 1,1,1,2-Tetrafluoroethane (refrigerant gas R134a) / ARCTON 134a / ethane, 1,1,1,2-tetrafluoro- / F 134a / FC 134a / formacel Z-4 blowing agent / FREON 134a / genetron 134a / HCFC-134a / HFA 134a / HFC-134a / HFC-134a tetrafluoroethane / HFC-134a tetrafluoroethane / KHLADON 134a / norflurane / R134a / R134a COLD SHOT / refrigerant R134a / refrigerant R134a COLD SHOT / SUVA 134a / SUVA cold-mp / SUVA trans a/c / SUVA-134a tetrafluoroethane / tetrafluoroethane / TG 134a

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

Use of the substance/mixture : Aerosol Duster

#### 1.3. Details of the supplier of the safety data sheet

KLEEN CONCEPTS  
 8551 EAST ANDERSON DRIVE, SUITE 108  
 SCOTTSDALE, AZ 85255  
 T 480-515-5576

#### 1.4. Emergency telephone number

Emergency number : CHEMTREC 24 Hour 1-800-424-9300

### SECTION 2: Hazards identification

#### 2.1. Classification of the substance or mixture

##### Classification (GHS-US)

Liquefied gas H280

Full text of H-phrases: see section 16

#### 2.2. Label elements

##### GHS-US labeling

Hazard pictograms (GHS-US) :



GHS04

Signal word (GHS-US) :

Warning

Hazard statements (GHS-US) :

H280 - Contains gas under pressure; may explode if heated

Precautionary statements (GHS-US) :

P410+P403 - Protect from sunlight. Store in a well-ventilated place  
 P251 - Pressurized container: Do not pierce or burn, even after use  
 P410+P412 - Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F

#### 2.3. Other hazards

Other hazards not contributing to the classification

: Contains gas under pressure; may explode if heated. Intentional misuse and inhalation abuse may cause cardiac or central nervous systems effects. Warning. May Cause frostbite in contact with skin. (Liquid form can be ejected if the aerosol can is not held upright during use.) Warning.

#### 2.4. Unknown acute toxicity (GHS-US)

No data available

### SECTION 3: Composition/information on ingredients

#### 3.1. Substance

Name : 1,1,1,2-tetrafluoroethane  
 CAS No : 811-97-2  
 EC no : 212-377-0

Name	Product identifier	%	Classification (GHS-US)
1,1,1,2-tetrafluoroethane (Main constituent)	(CAS No) 811-97-2	> 99	Liquefied gas, H280

Full text of H-phrases: see section 16

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### 3.2. Mixture

Not applicable

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

First-aid measures general	: Check the vital functions. Unconscious: maintain adequate airway and respiration. Respiratory arrest: artificial respiration or oxygen. Cardiac arrest: perform resuscitation. Victim conscious with laboured breathing: half-seated. Victim in shock: on his back with legs slightly raised. Vomiting: prevent asphyxia/aspiration pneumonia. Prevent cooling by covering the victim (no warming up). Keep watching the victim. Give psychological aid. Keep the victim calm, avoid physical strain. Depending on the victim's condition: doctor/hospital.
First-aid measures after inhalation	: Remove the victim into fresh air. Respiratory problems: consult a doctor/medical service.
First-aid measures after skin contact	: Rinse with water. Take victim to a doctor if irritation persists. In case of frostbites: Wash immediately with lots of water (15 minutes)/shower. Do not apply (chemical) neutralizing agents. Remove clothing while washing. Do not remove clothing if it sticks to the skin. Cover wounds with sterile bandage. Consult a doctor/medical service. If burned surface > 10%: take victim to hospital.
First-aid measures after eye contact	: Rinse immediately with plenty of water for 15 minutes. Do not apply neutralizing agents. Take victim to an ophthalmologist.
First-aid measures after ingestion	: Not applicable.

### 4.2. Most important symptoms and effects, both acute and delayed

Symptoms/injuries	: Not expected to present a significant hazard under anticipated conditions of normal use.
Symptoms/injuries after inhalation	: EXPOSURE TO HIGH CONCENTRATIONS: Accelerated heart action. Disturbances of heart rate. Coordination disorders. Feeling of weakness. Respiratory difficulties. Vomiting. Nausea. Disturbances of consciousness. Risk of lung oedema. Respiratory collapse.
Symptoms/injuries after skin contact	: Red skin. Blisters. Frostbites.
Symptoms/injuries after eye contact	: Not applicable.
Symptoms/injuries after ingestion	: Not applicable.
Chronic symptoms	: No effects known.

### 4.3. Indication of any immediate medical attention and special treatment needed

No additional information available

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

Suitable extinguishing media	: EXTINGUISHING MEDIA FOR SURROUNDING FIRES: Adapt extinguishing media to the environment.
Unsuitable extinguishing media	: No unsuitable extinguishing media known.

### 5.2. Special hazards arising from the substance or mixture

Fire hazard	: DIRECT FIRE HAZARD. Non combustible.
Explosion hazard	: INDIRECT EXPLOSION HAZARD. Heat may cause pressure rise in tanks/drums: explosion risk.
Reactivity	: On burning: release of toxic and corrosive gases/vapours (hydrofluoric acid, carbon monoxide - carbon dioxide, carbonyl fluoride). Reacts with (some) acids.

### 5.3. Advice for firefighters

Precautionary measures fire	: Exposure to fire/heat: consider evacuation.
Firefighting instructions	: Cool tanks/drums with water spray/remove them into safety. Physical explosion risk: cool from behind cover. Do not move the load if exposed to heat. After cooling: persistent risk of physical explosion. Dilute toxic gases with water spray.
Protection during firefighting	: Heat/fire exposure: compressed air/oxygen apparatus.
Other information	: NFPA Aerosol Level 1.

## SECTION 6: Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

#### 6.1.1. For non-emergency personnel

Protective equipment	: Insulating gloves. Protective clothing. Large spills/in enclosed spaces: compressed air apparatus.
Emergency procedures	: Keep upwind. Mark the danger area. Seal off low-lying areas. Close doors and windows of adjacent premises. No naked flames. Carry out specific temperature controls. Wash contaminated clothes. Large spills/in confined spaces: consider evacuation.

#### 6.1.2. For emergency responders

Protective equipment	: Equip cleanup crew with proper protection.
Emergency procedures	: Ventilate area.

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### 6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

### 6.3. Methods and material for containment and cleaning up

For containment : Contain released substance, pump into suitable containers. Plug the leak, cut off the supply. Tip the container on one side to stop the leakage. Do not spray water on unheated tank walls.

Methods for cleaning up : Damaged/cooled tanks must be emptied.

### 6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

Additional hazards when processed : Pressurized container: Do not pierce or burn, even after use.

Precautions for safe handling : Comply with the legal requirements. Handle and open the container with care. Thoroughly clean/dry the installation before use. Keep away from naked flames/heat. Observe normal hygiene standards. Carry operations in the open/under local exhaust/ventilation or with respiratory protection. Measure the oxygen concentration in the air.

Hygiene measures : Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Do not eat, drink or smoke when using this product.

### 7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Comply with applicable regulations.

Storage conditions : Keep only in the original container in a cool, well ventilated place away from : Keep container closed when not in use.

Incompatible products : Strong bases. Strong acids.

Incompatible materials : Sources of ignition. Direct sunlight.

Storage temperature : < 50 °C

Heat-ignition : KEEP SUBSTANCE AWAY FROM: heat sources.

Prohibitions on mixed storage : KEEP SUBSTANCE AWAY FROM: (strong) acids.

Storage area : Store in a cool area. Keep out of direct sunlight. Ventilation at floor level. Aboveground. Meet the legal requirements.

Special rules on packaging : SPECIAL REQUIREMENTS: with pressure relief valve. clean. correctly labelled. meet the legal requirements.

Packaging materials : SUITABLE MATERIAL: No data available. MATERIAL TO AVOID: No data available.

### 7.3. Specific end use(s)

Follow Label Directions.

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

### 8.2. Exposure controls

Appropriate engineering controls : Local exhaust ventilation, vent hoods.

Personal protective equipment : Avoid all unnecessary exposure. Gloves. Safety glasses.



Materials for protective clothing : GIVE GOOD RESISTANCE: neoprene. nitrile rubber. butyl rubber.

Hand protection : Insulated gloves.

Eye protection : Safety glasses.

Skin and body protection : Protective clothing. Wear suitable protective clothing.

Respiratory protection : High vapour/gas concentration: self-contained respirator.

Other information : Do not eat, drink or smoke during use.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

Physical state : Gas

Appearance : Gas.

Molecular mass : 102.03 g/mol

Color : Colourless.

Odor : Ether-like odour.

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Odor threshold	: No data available
pH	: No data available
Relative evaporation rate (butyl acetate=1)	: No data available
Melting point	: -101 °C
Freezing point	: No data available
Boiling point	: -26 °C
Flash point	: Not applicable
Critical temperature	: 101 °C
Auto-ignition temperature	: > 743 °C
Decomposition temperature	: 368 °C
Flammability (solid, gas)	: No data available
Vapor pressure	: 6661 hPa @ 25 °C
Vapor pressure at 50 °C	: 13190 hPa
Critical pressure	: 40560 hPa
Relative vapor density at 20 °C	: < 3.52 @ 20°C
Relative density	: 1.2 @ -27°C
Specific gravity / density	: 1206 kg/m <sup>3</sup> @ -27 °C
Solubility	: Poorly soluble in water. Soluble in ethanol. Soluble in ether. Soluble in hexane. Water: 0.15 g/100ml (25 °C)
Log Pow	: 1.06 (OECD 107: Partition Coefficient (n-octanol/water): Shake Flask Method)
Log Kow	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidizing properties	: No data available
Explosive limits	: No data available

### 9.2. Other information

VOC content	: 0 %
Other properties	: Gas/vapour heavier than air at 20°C. Substance has neutral reaction. May generate electrostatic charges.

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

On burning: release of toxic and corrosive gases/vapours (hydrofluoric acid, carbon monoxide - carbon dioxide, carbonyl fluoride). Reacts with (some) acids.

### 10.2. Chemical stability

Stable under normal conditions.

### 10.3. Possibility of hazardous reactions

Not established.

### 10.4. Conditions to avoid

Direct sunlight. Extremely high or low temperatures.

### 10.5. Incompatible materials

Strong acids. Strong bases.

### 10.6. Hazardous decomposition products

Toxic fume. . Carbon monoxide. Carbon dioxide.

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

Acute toxicity : Not classified

TECHNI-TOOL DUSTER 134A 10 OZ. ( f )811-97-2	
LC50 inhalation rat (mg/l)	> 2000 mg/l/4h (Rat; Literature study)
LC50 inhalation rat (ppm)	> 359300 ppm/4h (Rat; Literature study)

Skin corrosion/irritation	: Not classified
Serious eye damage/irritation	: Not classified
Respiratory or skin sensitization	: Not classified
Germ cell mutagenicity	: Not classified

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Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
Specific target organ toxicity (single exposure)	: Not classified
Specific target organ toxicity (repeated exposure)	: Not classified
Aspiration hazard	: Not classified
Potential Adverse human health effects and symptoms	: Based on available data, the classification criteria are not met.
Symptoms/injuries after inhalation	: EXPOSURE TO HIGH CONCENTRATIONS: Accelerated heart action. Disturbances of heart rate. Coordination disorders. Feeling of weakness. Respiratory difficulties. Vomiting. Nausea. Disturbances of consciousness. Risk of lung oedema. Respiratory collapse.
Symptoms/injuries after skin contact	: Red skin. Blisters. Frostbites.
Symptoms/injuries after eye contact	: Not applicable.
Symptoms/injuries after ingestion	: Not applicable.
Chronic symptoms	: No effects known.

## SECTION 12: Ecological information

### 12.1. Toxicity

Ecology - general	: No environmental hazard.
Ecology - air	: Not classified as dangerous for the ozone layer (Regulation (EC) No 1005/2009). Included in the list of substances which may contribute to the greenhouse effect (Regulation (EC) No 842/2006). TA-Luft Klasse 5.2.5.
Ecology - water	: Mild water pollutant (surface water). Maximum concentration in drinking water: 1.5 mg/l (fluoride) (Directive 98/83/EC). Slightly harmful to fishes (LC50(96h) 100-1000 mg/l). Slightly harmful to invertebrates (Daphnia) (EC50 (48h): 100 - 1000 mg/l).

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LC50 fish 1	450 mg/l 96 h; Salmo gairdneri (Oncorhynchus mykiss)
EC50 Daphnia 1	980 mg/l (48 h; Daphnia magna)

### 12.2. Persistence and degradability

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Persistence and degradability	Not readily biodegradable in water.
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### 12.3. Bioaccumulative potential

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BCF other aquatic organisms 1	5 - 58 (Estimated value)
Log Pow	1.06 (OECD 107: Partition Coefficient (n-octanol/water): Shake Flask Method)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).

### 12.4. Mobility in soil

No additional information available

### 12.5. Other adverse effects

Other information : Avoid release to the environment.

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

Waste disposal recommendations	: Remove waste in accordance with local and/or national regulations. Hazardous waste shall not be mixed together with other waste. Different types of hazardous waste shall not be mixed together if this may entail a risk of pollution or create problems for the further management of the waste. Hazardous waste shall be managed responsibly. All entities that store, transport or handle hazardous waste shall take the necessary measures to prevent risks of pollution or damage to people or animals. Refer to manufacturer/supplier for information on recovery/ recycling.
Additional information	: LWCA (the Netherlands): KGA category 06. Hazardous waste according to Directive 2008/98/EC.
Ecology - waste materials	: Avoid release to the environment.

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### SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

US DOT (ground):	UN1950, Aerosols, non-flammable, 2.2, Limited Quantity
ICAO/IATA (air):	UN1950, Aerosols, non-flammable, 2.2, Limited Quantity
IMO/IMDG (water):	UN1950, Aerosols, non-flammable, 2.2, Limited Quantity
Special Provisions:	DOT-SP 10232: In accordance with this special permit, the product container is marked with DOT-SP10232 instead of 2Q. This packaging is approved for shipping as a Consumer Commodity.

#### 14.2. UN proper shipping name

Proper Shipping Name (DOT)	: Aerosols, non-flammable non-flammable, (each not exceeding 1 L capacity)
Department of Transportation (DOT) Hazard Classes	: 2.2 - Class 2.2 - Non-flammable compressed gas 49 CFR 173.115
Hazard labels (DOT)	: 2.2 - Non-flammable gas



DOT Special Provisions (49 CFR 172.102)	: DOT-SP 10232: In accordance with this special permit, the product container is marked with DOT-SP10232 instead of 2Q. This packaging is approved for shipping as a Consumer Commodity.
DOT Packaging Exceptions (49 CFR 173.xxx)	: 306
DOT Packaging Non Bulk (49 CFR 173.xxx)	: None
DOT Packaging Bulk (49 CFR 173.xxx)	: None

#### 14.3. Additional information

Other information	: No supplementary information available.
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#### Overland transport

Class (ADR)	: 2 - Gases
Hazard identification number (Kemler No.)	: 20
Classification code (ADR)	: 2A
Hazard labels (ADR)	: 2.2 - Non-flammable compressed gas



Orange plates	: 
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Tunnel restriction code (ADR)	: C/E
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#### Transport by sea

DOT Vessel Stowage Location	: A - The material may be stowed "on deck" or "under deck" on a cargo vessel and on a passenger vessel.
DOT Vessel Stowage Other	: 48 - Stow "away from" sources of heat, 87 - Stow "separated from" Class 1 (explosives) except Division 14, 126 - Segregation same as for Class 9, miscellaneous hazardous materials
EmS-No. (1)	: F-C
EmS-No. (2)	: S-V

#### Air transport

DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27)	: 75 kg
DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75)	: 150 kg

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### SECTION 15: Regulatory information

#### 15.1. US Federal regulations

##### TECHNI-TOOL DUSTER 134A 10 OZ. (811-97-2)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

SARA Section 311/312 Hazard Classes	Sudden release of pressure hazard
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#### 15.2. International regulations

##### CANADA

##### TECHNI-TOOL DUSTER 134A 10 OZ. (811-97-2)

WHMIS Classification	Class A - Compressed Gas
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#### EU-Regulations

No additional information available

#### Classification according to Regulation (EC) No. 1272/2008 [CLP]

Press. Gas

Full text of H-phrases: see section 16

#### Classification according to Directive 67/548/EEC [DSD] or 1999/45/EC [DPD]

Not classified

#### 15.2.2. National regulations

No additional information available

#### 15.3. US State regulations

No additional information available

### SECTION 16: Other information

Other information : None.

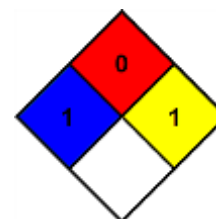
Full text of H-phrases: see section 16:

Liquefied gas	Gases under pressure Liquefied gas
H280	Contains gas under pressure; may explode if heated

NFPA health hazard : 1 - Exposure could cause irritation but only minor residual injury even if no treatment is given.

NFPA fire hazard : 0 - Materials that will not burn.

NFPA reactivity : 1 - Normally stable, but can become unstable at elevated temperatures and pressures or may react with water with some release of energy, but not violently.



#### HMIS III Rating

Health : 1 Slight Hazard - Irritation or minor reversible injury possible

Flammability : 0 Minimal Hazard

Physical : 1 Slight Hazard

Personal Protection : B

SDS US (GHS HazCom 2012) - Technical Chemical

*The Supplier identified in Section 1 of this MSDS has evaluated this product and certifies it to be labeled and packaged in compliance with the applicable provisions of the Federal Hazardous Substance Act as stated in 16 CFR 1500 and enforced by the Consumer Product Safety Commission, and where applicable the products that require Child Resistant Closures are packaged in accordance with the Poison Prevention Packaging Act as stated in 16 CFR 1700 and enforced by the Consumer Product Safety Commission. All closures have been tested in accordance with the latest protocols. No other testing is required to certify compliance with the above. The date of manufacture is stamped on the product.*

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