

# SAFETY DATA SHEET

## 1. Identification of the substance/mixture and of the company

### 1.1 Product identifier

**Product Name:**  
**Type KC™ Contact Cleaner Aerosol**

**Product ID numbers:** KC-16, KC-16LA

### 1.2 Relevant identified uses of the mixture and uses advised against

**Identified uses:** Contact cleaning

**List of advices against:** Not applicable.

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

**Supplier/Manufacturer:**

**American Polywater Corporation**

11222 - 60th Street North

Stillwater, MN 55082 USA

Tel: 1-651-430-2270

Email: sds@polywater.com

### 1.4 Emergency telephone numbers

INFOTRAC 1-352-323-3500 (USA)

## 2. Hazards Identification

### 2.1 Classification of the substance or mixture

Classification according to USA OSHA 29 CFR 1910.1200 (2012) and Canada HPR (SOR/2015-17; WHMIS 2015).

Aerosol 3 H229

Eye Irrit 2B H320

STOT Se 3 (CNS) H336

### 2.2 Label elements

This product is intended for consumer use and is labeled according to CPSC guidelines and not to GHS guidelines listed below. It is safe for consumers and other users under normal and reasonably foreseeable use. The SDS contains valuable information for industrial workplace conditions.

**Contains:** Ethyl nonafluoroisobutyl ether, Ethyl nonafluorobutyl ether, trans-Dichloroethylene, norflurane



**Pictograms:**

**Signal word:** Warning

**Hazard Statements:**

H229 Pressurized container, may burst if heated

H320 Causes eye irritation.

H336 May cause drowsiness or dizziness.

**Precautionary Statements:**

P210 Keep away from flames and hot surfaces. No smoking.

P251 Do not pierce or burn, even after use.

P261 Avoid breathing spray or vapors.

- P264 Wash thoroughly after handling.
- P271 Use only outdoors or in a well-ventilated area.
- P304 + P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
- P305 + P351 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P337 + P313 If eye irritation persists: Get medical attention.
- P410 + P412 Protect from sunlight. Do not expose to temperatures exceeding 50°C/122°F.
- P501 Dispose of contents/container in accordance with local and national regulations.

**2.3 Other hazards:** No information available.

**3. Composition/Information on Ingredients**

<u>Component</u>	<u>CAS #</u>	<u>EC #</u>	<u>Wt. %</u>
Ethyl nonafluorobutyl ether	163702-05-4	--	< 30
Ethyl nonafluoroisobutyl ether	163702-06-5	--	< 30
Trans-Dichloroethylene	156-60-5	205-860-2	< 15
1,1,1,2-Tetrafluoroethane	811-97-2	212-377-0	< 30

**4. First Aid Measures**

**4.1 Description of first aid measures**

- Eye Contact:** Flush eyes with clean water. Remove contact lenses if easy to do. Continue rinsing. If irritation persists, seek medical attention.
- Skin Contact:** Remove contaminated clothing; flush skin thoroughly with water. If irritation occurs, seek medical attention.
- Inhalation (Breathing):** If irritation of nose or throat develops, move to fresh air. If irritation persists, seek medical attention.
- Ingestion (Swallowing):** Rinse mouth. If you feel unwell, get medical attention.

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

Refer to Section 11 for more information.

**4.3 Indication of immediate medical attention and special treatment needed.**

No information available.

**5. Firefighting Measures**

**5.1 Extinguishing media:**

Carbon dioxide, water fog, dry chemical or foam.

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

**Hazardous decomposition and by-products:**

Burning generates CO, CO<sub>2</sub> and smoke. Smoke may be acrid and fumes irritating.

**5.3 Advice for firefighters**

Wear full protective clothing, including self-contained, positive pressure or pressure-demand breathing apparatus. Sealed container can build up pressure when exposed to high heat. Use water spray to cool fire exposed containers. Aerosol cans can build up pressure and explode when exposed to temperatures greater than 122°F (50°C).

**6. Accidental Release Measures**

**6.1 Personal precautions, protective equipment and emergency procedures:**

Keep away from heat/sparks/open flames/hot surfaces. No smoking. For a spill in a confined space, provide mechanical ventilation to disperse or exhaust vapors. For emergency responders: use respiratory protection: half-face or full-face respirator with filter(s) for organic vapor for spills in a confined space. Refer to other sections of this SDS for information regarding physical and health hazards and personal protective equipment.

**6.2 Environmental precautions:**

Avoid release to the environment. Dyke the spill to prevent entry into waterways, sewers, basements or confined areas.

**6.3 Methods materials for containment and cleaning up:**

Absorb spill with sand or absorbents. Collect as much of the spilled material as possible using non-sparking tools and transfer to a container. Seal the container. Remember, adding an absorbent material does not change the toxicity or flammability hazard.

**6.4 Reference to other sections:**

Refer to Sections 4, 5, 8, and 13 for more information.

**7. Handling and Storage**

**7.1 Precautions for safe handling**

Avoid breathing vapors or spray. Do not get in eyes, on skin, or on clothing. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Wash contaminated clothing before reuse. For industrial or professional use only.

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

Do not expose container to direct sunlight or temperatures above 122°F (50°C). Store in a well-ventilated place. Keep container tightly closed. Keep cool. Store away from acids and oxidizing agents.

**7.3 Specific end uses**

See product literature for further information.

**8. Exposure Controls / Personal Protection**

**8.1 Control parameters**

**Exposure limits and recommendations:**

**Ethyl nonafluorobutyl ether (163702-05-4)**

Country/Source	Long-term exposure limit – 8 hr. TWA	Short-term exposure limit – 15 min
Manufacturer, RCP* TWA	200 ppm	--
USA, ACGIH TWA	750 ppm	Not established
USA, OSHA PEL	--	--
Alberta, British Columbia, Quebec, Yukon, Saskatchewan, Ontario*	--	--

**Ethyl nonafluoroisobutyl ether (163702-06-5)**

Country/Source	Long-term exposure limit – 8 hr. TWA	Short-term exposure limit – 15 min
Manufacturer, RCP* TWA	200 ppm	--
USA, ACGIH TWA	750 ppm	Not established
USA, OSHA PEL	--	--
Alberta, British Columbia, Quebec, Yukon, Saskatchewan, Ontario*	--	--

**Trans-Dichloroethylene (156-60-5)**

Country/Source	Long-term exposure limit – 8 hr. TWA	Short-term exposure limit – 15 min
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USA, ACGIH TWA	200 ppm	
USA, OSHA PEL	790 mg/m <sup>3</sup> , 200 ppm	--
Alberta	793 mg/m <sup>3</sup> , 200 ppm	--
British Columbia	200 ppm	--
Ontario	200 ppm	--
Quebec	793 mg/m <sup>3</sup> , 200 ppm	--
Saskatchewan	200 ppm	250 ppm
Yukon	790 mg/m <sup>3</sup> , 200 ppm	1000 mg/m <sup>3</sup> , 250 ppm

**1,1,1,2-Tetrafluoroethane (811-97-2)**

<b>Country/Source</b>	<b>Long-term exposure limit – 8 hr. TWA</b>	<b>Short-term exposure limit – 15 min</b>
USA, AIHA OEL	1,000 ppm	
USA, OSHA PEL	--	--
Alberta, British Columbia, Quebec, Yukon, Saskatchewan, Ontario*		--

*\* Manitoba, Newfoundland and Labrador, Nova Scotia, and Prince Edward Island are all based on the current ACGIH TLVs. British Columbia is based on current ACGIH TLV unless otherwise noted. New Brunswick is based on an older version ACGIH. Nunavet and Northwest Territories are based heavily on current ACGIH TLVs.*

**8.2 Exposure controls**

**Respiratory protection:**

Normal ventilation is adequate. If exposure exceeds recommended limits, respirator protection is recommended. Use a respirator or gas mask with cartridges for organic vapors (NIOSH or CE approved) with particulate pre-filter, P100 or AP2.

**Protective gloves:**

No chemical protective gloves are required.

**Eye protection:**

Safety goggles recommended.

**Other protective equipment:**

It is suggested that a source of clean water be available in work area for flushing eyes and skin. Impervious clothing should be worn as needed.

<b>9. Physical and Chemical</b>
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**9.1 Information of basic physical and chemical properties (bulk liquid)**

<b>Appearance:</b>	Clear, colorless liquid in aerosol package.
<b>Odor threshold:</b>	Not available
<b>pH:</b>	Not available
<b>Freezing point:</b>	Not available
<b>Boiling point:</b>	Not available
<b>Flash point:</b>	None
<b>Evaporation rate:</b>	Not available
<b>Flammability (solid, gas):</b>	Not applicable to liquids
<b>Upper/lower flammability or explosive limits:</b>	LEL = 6.7% UEL = 13.7%
<b>Vapor pressure:</b>	330 mm Hg
<b>Vapor density (Air = 1):</b>	Not available
<b>Specific gravity (H<sub>2</sub>O = 1):</b>	1.4
<b>Solubility in water:</b>	Negligible

<b>Partition coefficient: n-octanol/water:</b>	Not available
<b>Auto-ignition temperature:</b>	396°C
<b>Decomposition temperature:</b>	Not available
<b>Viscosity:</b>	0.6 centipoise

**9.2 Other Information**

<b>Volatiles (Weight %):</b>	100%
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**10. Stability and Reactivity****10.1 Reactivity:**

See remaining headings in Section 10.

**10.2 Chemical stability:**

Stable

**10.3 Possibility of hazardous reactions:**

None known.

**10.4 Conditions to avoid:**

High shear, high temperature conditions.

**10.5 Incompatible materials :**

Aluminum or Magnesium powder.

**10.6 Hazardous decomposition products:**

Above the boiling point, small amounts of toxic decomposition products may form, including hydrogen fluoride, hydrogen chloride, and perfluoroisobutylene.

**11. Toxicological Information****11.1 Information on toxicological effects:****Acute toxicity****Eye contact:**

Moderate eye irritant.

**Skin contact:**

Contact with skin during use is not expected to result in significant irritation. Persons with pre-existing skin disorders may be more susceptible to skin irritation from this material.

**Irritation and Sensitization Potential:**

Product is not a sensitizer.

**Inhalation (Breathing):**

May cause irritation of the nose and throat. May cause drowsiness or dizziness. Signs/symptoms include cough, sneezing, nasal discharge, headache, hoarseness and nose and throat pain.

**Ingestion:**

May be harmful if swallowed. Gastrointestinal irritation signs/symptoms may include abdominal pain, stomach upset, nausea, vomiting and diarrhea.

**Toxicity to Animals:**

Ethyl nonafluorobutyl ether	LD <sub>50</sub> (oral rat) >2,000 mg/kg
	LC <sub>50</sub> (inhl rat) >989 mg/L, 4 hours
Ethyl nonafluoroisobutyl ether	LD <sub>50</sub> (oral rat) >2,000 mg/kg
	LC <sub>50</sub> (inhl rat) >989 mg/L, 4 hours
	RD <sub>50</sub> 1000 ppm
Trans-Dichloroethylene	LD <sub>50</sub> (oral rat) >5,000 mg/kg
	LD <sub>50</sub> (dermal rabbit) >5,000 mg/kg
	LC <sub>50</sub> (inhl rat) 95.6 mg/L, 4 hours
Norflurane	LC <sub>50</sub> (inhl rat) >500,000 ppm, 4 hours

**Chronic Exposure:**

**Reproductive Toxicity:**

	Not available.	
	NOAEL 1,000 mg/kg	
Ethyl nonafluorobutyl ether	(oral rat, 28 days)	Not toxic to reproduction and/or development
	NOAEL 1,000 mg/kg/day	
	(oral rat, 28 days)	Not toxic to female reproduction
	NOAEL 1,000 mg/kg/day	
	(oral rat, 28 days)	Not toxic to male reproduction
	NOAEL 3,000 ppm (inhl rat)	Not toxic to reproduction and/or development
	NOAEL 260.1 mg/l	
	(inhl rat, during gestation)	Not toxic to female reproduction
	NOAEL 263.4 mg/l	
	(inhl rat, 28 days)	Not toxic to male reproduction
	NOAEL 260 mg/l	Some positive developmental data exist, but not sufficient for classification
	(inhl rat, 28 days)	
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Ethyl nonafluoroisobutyl ether	NOAEL 1,000 mg/kg	Not toxic to reproduction and/or development
	(oral rat, 28 days)	
	NOAEL 1,000 mg/kg/day	Not toxic to female reproduction
	(oral rat, 28 days)	
	NOAEL 1,000 mg/kg/day	Not toxic to male reproduction
	(oral rat, 28 days)	
	NOAEL 3,000 ppm (inhl rat)	Not toxic to reproduction and/or development
	NOAEL 260.1 mg/l	
	(inhl rat, during gestation)	Not toxic to female reproduction
	NOAEL 263.4 mg/l	
	(inhl rat, 28 days)	Not toxic to male reproduction
	NOAEL 260 mg/l	Some positive developmental data exist, but not sufficient for classification
	(inhl rat, 28 days)	
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Trans-Dichloroethylene	NOAEL 3,000 mg/kg/day	Not toxic to female reproduction
	(oral rat, 90 days)	
	NOAEL 3,000 mg/kg/day	Not toxic to male reproduction
	(oral rat, 90 days)	
	NOAEL 16 mg/l	Not toxic to female reproduction
	(inhl rat, 90 days)	
	NOAEL 16 mg/l	Not toxic to male reproduction
	(inhl rat, 90 days)	Some positive developmental data exist, but not sufficient for classification
	NOAEL 24 mg/l	
	(inhl rat, during organogenesis)	

**Mutagenicity:**

Not available.

**Teratogenicity:**

Not available.

**Specific Target Organ Toxicity (STOT) – Single Exposure**

	Test Parameter	Target Organ(s)	Value
Ethyl nonafluorobutyl ether	NOAEL 204 mg/l (inhl dog, 17 mins)	Cardiac sensitization	Some positive data exist, but not sufficient for classification
	NOAEL 989 mg/l (inhl rat, 4 hrs.)	Respiratory irritation	All data negative
Ethyl nonafluoroisobutyl ether	NOAEL 204 mg/l (inhl, dog, 17 mins)	Cardiac sensitization	Some positive data exist, but not sufficient for classification
	NOAEL 989 mg/l (inhl rat, 4 hrs.)	Respiratory irritation	All data negative
	NOAEL not available (inhl human, occupational exposure)	CNS depression	Some positive data exist, but not sufficient for classification
Trans-Dichloroethylene	NOAEL not available (inhl human, occupational exposure)	Respiratory irritation	Some positive data exist, but not sufficient for classification

<b>Specific Target Organ Toxicity (STOT) – Repeated Exposure</b>	<b>Test Parameter</b>	<b>Target Organ(s)</b>	<b>Value</b>
Norflurane	LOAEL 4,500 mg/kg (oral rat, not applicable) NOEL 50,000 ppm (inhl, dog)	CNS depression Cardiac sensitization	May cause drowsiness or dizziness All data negative
Ethyl nonafluorobutyl ether	NOAEL 263.4 mg/l (inhl rat, 4 weeks)	Liver, kidney and/or bladder, respiratory system	Some positive data exist, but not sufficient for classification
	NOAEL 263.4 mg/l (inhl rat, 4 weeks) NOAEL 1,000 mg/kg/day (oral rat, 28 days)	Heart, endocrine system, bone marrow, hematopoietic system, nervous system, immune system Blood, liver, kidney and/or bladder	All data negative Some positive data exist, but not sufficient for classification
	NOAEL 1,000 mg/kg/day (oral rat, 28 days)	Heart, endocrine system, bone marrow, hematopoietic system, nervous system, immune system	All data negative
Ethyl nonafluoroisobutyl ether	NOAEL 263.4 mg/l (inhl rat, 4 weeks)	Liver, kidney and/or bladder, respiratory system	Some positive data exist, but not sufficient for classification
	NOAEL 263.4 mg/l (inhl rat, 4 weeks) NOAEL 1,000 mg/kg/day (oral rat, 28 days)	Heart, endocrine system, bone marrow, hematopoietic system, nervous system, immune system Blood, liver, kidney and/or bladder	All data negative Some positive data exist, but not sufficient for classification
	NOAEL 1,000 mg/kg/day (oral rat, 28 days)	Heart, endocrine system, bone marrow, hematopoietic system, nervous system, immune system	All data negative
Trans-Dichloroethylene	NOAEL 16 mg/l (inhl rat, 90 days) NOAEL 2,000 mg/kg/day (oral rat, 14 weeks) NOAEL 125 mg/kg/day (oral rat, 14 weeks)	Endocrine system, liver, kidney and/or bladder, respiratory system Kidney and/or bladder	All data negative Some positive data exist, but not sufficient for classification Some positive data exist, but not sufficient for classification
	NOAEL 2,000 mg/kg/day (oral rat, 28 days)	Blood, liver Heart, immune system, respiratory system	All data negative
<b>Toxicologically Synergistic Products:</b>	Not available.		
<b>Carcinogenic Status:</b>	This substance has not been identified as a carcinogen or probable carcinogen by NTP, IARC, or OSHA, nor have any of its components.		

**12. Ecological Information**

**12.1 Toxicity:**

**Ecotoxicity:** No information available.

**Aquatic Toxicity:** No information available.

**12.2 Persistence and degradability:** No information available.

**12.3 Bioaccumulation potential:** No information available.

**12.4 Mobility in soil:** No information available.

**12.5 Results of PBT and vPvB Assessment:** This product is not, nor does it contain a substance that is a PBT or vPvB.

**12.6 Other adverse effects:** None known.

**13. Disposal Considerations**

Dispose of product in accordance with National and Local Regulations.

**14. Transport Information**

**UN Number:** 1950

**UN Proper shipping name:** AEROSOLS, Nonflammable, less than 1 liter each, Class 2.2, LTD QTY

**Transport hazard class(es):** Class 9

**Packing group:** Not Applicable

**Environmental hazards:** None known

**Special precautions:** None known

**TDG:** Not Regulated

**ICAO/IATA-DGR:** Consumer Commodity, ID 8000, Class 9, LTD QTY

**IMDG:** UN 1950, AEROSOLS, Nonflammable, less than 1 liter each, Class 2.2, LTD QTY

**15. Regulatory Information**

**15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**

**USA Federal and State**

All components are listed on the TSCA inventory.

<b>Hazard Categories for SARA Section 311/312 Reporting</b>	<u>Acute</u> No	<u>Chronic</u> No	<u>Fire</u> Yes	<u>Pressure</u> No	<u>Reactive</u> No
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	<b>CERCLA/SARA Sec 302</b>		
<u>Components</u>	<u>Hazardous Substance RQ</u>	<u>EHS TPQ</u>	<u>SARA Sec. 313 Toxic Release</u>
Trans-Dichloroethylene	No	No	Yes

<b>NFPA Ratings:</b>	Health:	3
	Fire:	1
	Reactivity:	0

National Fire Protection Association (NFPA) hazard ratings are designed for use by emergency response personnel during spill, fire or similar emergencies. Hazard ratings are based on physical and toxic properties of combustion or decomposition.

**California Proposition 65**

This product does not contain any chemicals known to the State of California to cause cancer, birth defects, or any other reproductive harm or has been assessed to be below OEHHA Safe Harbor exposure levels required for labeling.

**European Union**



Product complies with the communication requirements of REACH Regulation (EC) No. 1907/2006. All components are listed on the European Inventory of Existing Chemical Substances (EINECS). Contains no substance on the REACH candidate list  $\geq 0.1\%$  SCL. Does not contain notified substances from the ELINCS List, Directive 92/32/EEC. Contains no REACH substances with Annex XVII restrictions.

**Canada**

All components are listed on the DSL inventory.

**Australia**

All components are listed on the AICS.  
Hazardous according to criteria of NOHSC Australia.

**15.2 Chemical Safety Assessment**

No chemical safety assessment has been carried out for the mixture by the supplier.

**16. Other Information**

**Abbreviations and acronyms:**

OSHA = Occupational Safety and Health Administration  
CLP = Classification, Labeling and Packaging Regulation  
STOT = Specific Target Organ Toxicity  
LD<sub>50</sub> = Median Lethal Dose  
DNEL = Derived No Effect Level  
ACGIH = American Conference of Governmental Industrial Hygienists  
TSCA = Toxic Substances Control Act (USA)  
DSL = Domestic Substances List (Canada)  
AICS = Australian Inventory of Chemical Substances

<b>Revision Date:</b>	March 18, 2020
<b>Revision Number:</b>	7
<b>Supersedes:</b>	February 29, 2020
<b>Other:</b>	Not Applicable
<b>Indication of Changes:</b>	Section 14 corrected. Written in accordance with the provisions of OSHA 1910.1200 App D (2012) and Canada HPR (SOR/2015-17) (WHMIS 2015). (GHS format)

The information and recommendations contained herein are believed to be reliable. However, the supplier makes no warranties, express or implied, concerning the use of this product. The buyer must determine conditions of safe usage and assumes all risk and liability in handling this product.