



# OAK INDUSTRIAL SUPPLIES

*"THE INDUSTRIAL SUPPLIES PEOPLE"*

HAMILTON ROAD SUTTON IN ASHFIELD

NOTTINGHAMSHIRE NG17 5LN

TELEPHONE 01623 442222 FAX 01623 441234

## **HEALTH & SAFETY DATA SHEET**

### Identification Of The Substance And Supplier

Product Name: **Trichloroethylene**

Name Of Supplier: Oak Industrial Supplies  
Hamilton Road  
Sutton in Ashfield  
Nottinghamshire  
NG17 5LN

Business Tel No: 01623 442222

Emergency Tel No: 01484 713201

**Application:** General Degreasing. This product is exclusively made for industrial applications

### Composition/Information On Ingredients.

<b>Ingredient Name</b>	<b>Einecs</b>	<b>CAS No.</b>	<b>Contents</b>	<b>Symbol</b>
<b>Risk</b>	<b>No.</b>			
<b>(R No.)</b>				
TRICHLOROETHYLENE 45, 36/38, 52/53, 67	201-167-4	79-01-6	99 %w/w	T
Stabiliser (not classified hazardous)				

The full text for all R-phrases are shown in section 16.

**EU Index No.:** 602-027-00-9

**Formula:** C<sub>2</sub>H-Cl<sub>3</sub>

**CAS No.:** 79-01-6

### Hazards Identification.

Carcinogen Category 2.

Mutagen Category 3.

May cause cancer

Vapours may cause drowsiness and dizziness

Irritating to eyes and skin

Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.



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Concentrations substantially above the admissible concentration at the workplace can damage central nervous system and may cause collapse

## **First Aid Measures.**

**General:** Consulting a physician for specific advice. Show this safety data sheet to the doctor in attendance. Remove affected person from source of contamination. Care must be taken to ensure that the person administering aid to the patient does not become contaminated/overcome by the substance. Get medical attention immediately. It is good practice in industrial hygiene to avoid contact with solvents by using appropriate protective measures whenever possible.

**Specific First Aid Treatments:** Symptomatic and supportive therapy as indicated. Adrenaline and similar sympathomimetic drugs should be avoided following exposure as cardiac arrhythmia may result with possible subsequent cardiac arrest. Gastric lavage may be effective when performed within 4 hours of ingestion. Following ingestion absorbents such as activated charcoal may be of value.

**Inhalation:** Move the exposed person to the fresh air at once. Perform artificial respiration if breathing has stopped. Keep the affected person warm and at rest. Get prompt medical attention. When breathing is difficult, properly trained personnel may assist affected person by administering 100% oxygen.

**Ingestion:** DO NOT induce vomiting. Get medical attention immediately. Rinse nose, mouth and throat with water. Give water to drink.

**Skin:** Remove affected person from the source of contamination. Promptly wash contaminated skin with soap or mild detergent and water. Promptly remove clothing if soaked through and wash as above. Get medical attention immediately.

**Eyes:** Promptly wash eyes with plenty of water while lifting the eye lids. Continue to rinse for at least 15 minutes and get medical attention.

## **Fire Fighting Measures.**

**Extinguishing Media:** Water spray, fog or mist. Carbon Dioxide (CO<sub>2</sub>). Dry chemicals, sand, dolomite etc. Use extinguishing media appropriate for surrounding fire.

**Special Fire Fighting Procedures:** Keep run-off water out of sewers and water sources. Dike for water control. Cool containers exposed to flames with water until well after the fire is out. Stay away from ends of tanks. If risk of water pollution occurs, notify appropriate authorities. In case of fire, wear self contained breathing apparatus

**Unusual Fire & Explosion Hazards:** May develop highly toxic or corrosive fumes if heated. SPECIFIC HAZARDS - May be ignited by open flame. Run off from the fire must not enter drains.



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**Hazardous Decomposition Products:** Toxic gases/vapours/fumes of:  
Hydrogen chloride (HCl). Phosgene (COCl<sub>2</sub>).

**Protective Measures In Fire:** Wear suitable protective clothing. Wear suitable respiratory protection when dealing with a fire.

## Accidental Release Measures.

**Personal Precautions During Spill:** Ensure good ventilation. Avoid breathing vapour. Wear appropriate protective clothing and respiratory protection. Use respiratory protection if vapours are released. Vapour may cause drowsiness and dizziness. Repeated exposure can cause skin dryness and cracking.

**Precautions To Protect Environment:** Do not let the product or washing down water enter natural water courses or the sewers. Inform relevant authorities if this occurs.

**Spill Cleanup Methods:** Stop Leak if possible without risk. DO NOT touch spilled material! Provide ventilation and confine spill. Do not allow runoff to sewer. Clean-up personnel should use respiratory and/or liquid contact protection. Wash thoroughly after dealing with a spillage. Collect for reclamation or absorb in vermiculite, dry sand or similar material. Collect in containers and seal securely.

## Handling And Storage.

**Usage Precautions:** Ventilate well, avoid breathing vapours. Use approved respirator if air contamination is above accepted level. Avoid spilling, skin and eye contact. Keep away from heat, sparks and open flame. Read and follow manufacturer's recommendations. When welding metals degreased with trichloroethylene, special care is required to ensure that all vapours have evaporated from the components and surrounding area's. Welding arcs can cause trichloroethylene vapour to be broken down into toxic vapours (phosgene). Vapours are heavier than air and can cause suffocation by reducing oxygen available for breathing. Use only in area's with appropriate exhaust ventilation. Pressure relief devices are recommended on process and storage vessels.

**Usage Description:** Storage tanks must be positioned within bunded area. The information contained within this Health and Safety Data Sheet is given as a guide to the precautions required to maintain a safe work environment. No smoking whilst using this product as it can result in contamination of the tobacco and/or smoke and lead to the formation of the hazardous decomposition products mentioned in section 5 & 10 of this HSDS. For use as a metal treatment chemical.

**Storage Precautions:** Keep in cool, dry, ventilated storage and closed containers. Store at moderate temperatures in dry, well ventilated area. Keep



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containers tightly closed.

Keep away from heat,

sparks and open flame. Keep stabiliser levels constant to avoid explosive polymerisation. Protect from light, including direct sun rays

**Storage Criteria:** Toxic storage.

## Exposure Controls/Personal Protection.

<b>Ingredient Name</b>	<b>CAS No.</b>	<b>STD</b>	<b>LT EXP</b>
Trichloroethylene <b>(15 mins)</b>	79-01-6	MEL	<b>(8 hrs)</b>
(Sk)	150 ppm(Sk)		100 ppm

**Ingredient Comments:** Refer to the current edition of HSE Guidance Note EH 40 on Occupational Exposure Limits (United Kingdom).

## **Protective Equipment:**

**Process Control Measures:** Use engineering controls to reduce air contamination to the lowest levels possible. Wash all splashes from the skin immediately. Safety Shower.

**Ventilation:** If enclosed handling cannot be guaranteed, ventilation and protective clothing must be used in case of insufficient ventilation wear suitable respiratory equipment.

**Respirators:** SCBA, Self-contained breathing apparatus. SA, Supplied-air respirator. CCROV, CCR with organic vapour cartridge.

**Protective Gloves:** Protection against this requires special consideration. Protective gloves must be used if there is a risk of direct contact or splash. Use suitable protective gloves if risk of skin contact. Use protective gloves made of: Nitrile. Polyvinyl alcohol (PVA). Viton rubber (fluor rubber).

**Eye Protection:** Wear splash-proof eye goggles to prevent any possibility of eye contact. Use face shield in case of splash risk.

**Other Protection:** Use engineering controls to reduce air contamination to permissible exposure level. Provide eyewash station and safety shower. Wear appropriate clothing to prevent any possibility of skin contact. Wear rubber footwear. When using, do not eat, drink or smoke.

## **Hygienic Work Routines:**

## Physical And Chemical Properties.



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<b>Appearance:</b>	Clear. Liquid.	<b>Colour:</b>
Colourless		
<b>Odour/Taste:</b>	Ether. Sweet.	
<b>Physical Data Comments:</b>	Refer to current edition of HSE	
Guidance Note EH40 on Occupational Exposure Limits (United Kingdom)		
<b>Solubility Description:</b>	Slightly soluble in water. Negligible.	
Miscible with many organic solvents.		
<b>Solubility Value (g/100g H2O/20 deg C):</b>	0.11	<b>Boiling Point (deg</b>
c): 86 - 88		
<b>Melting Point (deg c):</b>	-86	<b>Specific Gravity</b>
(water=1):1.46 @ 20c		
<b>Vapour Density (air=1)</b>	4.54	<b>Vapour Pressure:</b>
57.80 @20c		
<b>Volatility Description:</b>	Highly Volatile	<b>Evaporation Rate:</b>
0.69		
<b>Volatile By Vol. (%):</b>	100	<b>pH-Value, Conc:</b>
7.1		

## Stability And Reactivity.

**Stability:** This product contains a stabiliser. Avoid: Heat, sparks, flames.

**Conditions To Avoid:** Avoid heat, flames and other sources of ignition. Avoid Direct Sunlight

**Materials To Avoid:** BARIUM, MAGNESIUM POWDER, MAGNESIUM, SOLID, NITROGEN DIOXIDE, OZONE, POTASSIUM HYDROXIDE, SODIUM, SODIUM HYDROXIDE Acids, oxidizing. Bases, alkalies (inorganic). Strong oxidizing agents. Strong reducing agents. Alkali metals. Alkali earth metals. Amines. Prolonged contact with aluminium or light alloys may cause a reaction with gas generation and pressure build up.

**Hazardous Decomposition Products:** Toxic gases/vapours/fumes of: Hydrogen chloride (HCl). Phosgene (COCl<sub>2</sub>). Chloroacetylenes

## Toxicological Information

**Toxic Dose1-LD50:** 4900.00mg/kg (oral rat)

**Toxic Conc. - LC50:** 8000.00ppm/4h (inh-rat)

**Toxicological Information:** Repeated exposure at high levels produces adverse effects on the liver and to a lesser extent on kidneys. Repeated exposure may result in 'Degreasing Flush', a pronounced redness of the skin on hands, face, arms, feet and trunk which may be exacerbated by the consumption of alcohol. The effect can intensify over a 30 minute period, but usually



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disappears after 1 hour. Symptoms may occur up to 6 weeks after the last exposure to trichloroethylene and can reoccur if exposure continues.

**Health Hazards, General:** Known or suspected carcinogen for humans. Prolonged and repeated contact with solvents over a long period may lead to permanent health problems.

**Inhalation:** Toxic: Danger of very serious irreversible effects through inhalation. Vapour may affect central nervous system and cause headache, discomfort, vomiting or intoxication. High concentrations (>300ppm) will lead to adverse effects on the CNS, causing nausea, headaches, dizziness and lightheadedness. Concentrations in extreme cases coma and death. Very high exposures may cause an abnormal heart rhythm and prove suddenly fatal.

**Skin:** Irritating to skin. Toxic Through skin absorption (percutaneous).

**Eyes:** Irritation of eyes and mucous membranes.

**Health Warnings:** This substance is a human carcinogen. Gas or vapour is toxic or extremely irritating even on brief exposure. CNS depressant. Acts as a defatting agent on skin. May cause cracking of skin, and eczema. Carcinogen Cat 2.

**Other Health Effects:** Carcinogen Category 2. Mutagen Category 3.

Trichloroethylene has been associated with cancer in rodents

**Route Of Entry:** Inhalation. Ingestion. Skin and/or eye contact. Skin absorption.

**Target Organs:** Central Nervous system. Eyes. Gastro-intestinal tract. Heart & cardiovascular system. Kidneys. Liver. Respiratory system, lungs. Skin.

**Medical Symptoms:** Irritation of eyes and mucous membranes. Upper respiratory irritation. General respiratory distress, unproductive cough. Skin irritation. Nausea, vomiting. Central nervous system depression. Drowsiness, dizziness, disorientation, vertigo. Mild intoxication (incl. Fatigue, lassitude, irritability, headache, nausea).

**Medical Considerations:** Chronic respiratory and obstructive airway diseases. Skin disorders and allergies. Liver and/or kidney problems. Convulsive disorders, CNS problems. Pre-existing heart problems.

## Ecological Information.

**Environmental Hazards:** This product has only slight mobility in soil. Not readily biodegradable.

**Mobility:** Slight mobility in soil.

**Bio Accumulation:** Not expected to bio-accumulate.

**Degradability:** This product is expected to biodegrade slowly.

**Acute Fish Toxicity:** LC50/96h/minnows = 52mg/l (trichloroethylene)

EC50/96h/Algae = 95mg/l. (trichloroethylene) LC50/96h/shrimp = 14mg/l (trichloroethylene)



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## Disposal

### Considerations.

**General/Cleaning:** Contaminated packages must be completely emptied before sending away for laundering and re-use

**Disposal Methods:** Use specialist disposal reference books for detail procedures. Contact specialist disposal companies. These goods and packaging must be disposed of in accordance with the special Waste Regulations 1996. Uncleaned empty packages should be disposed of in the same manner as the contents.

### Transport Information.

#### **Label For Conveyance:**

#### **Road:**

<b>UN No:</b>	1710	
<b>Hazards Class (ADR):</b>	Division 6.1: Toxic Substances.	<b>ADR Class No.:</b>
6.1		
<b>ADR Item No.:</b>	15c	<b>ADR Labels No.:</b>
6.1A		
<b>Hazchem Code:</b>	2Z	<b>Cefic Tec(R) No.:</b>
723		

#### **Rail:**

#### **Sea:**

<b>UN Sea:</b>	1710	<b>Sea</b>
<b>Transport Class No.:</b>	6.1	
<b>IMDG page No.:</b>	6243	<b>Sea Pack GR:</b> III
<b>Marine Pollutant:</b>	<b>NO.</b>	



#### **Air**

<b>UN Air:</b>	1710	<b>Air Transport Class No.:</b> 6.1
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### Regularity Information.

**EEC (EINECS) No.:** 210-167-4

**Label For Supply:**



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**Risk Phrases:**

R-36/38	Irritating to eyes and skin.
R-45	May cause cancer.
R-52/53	Harmful to aquatic organisms, may cause long-term adverse aquatic environment. effects in the
R-67	Vapours may cause drowsiness and dizziness.

**Safety Phrases:**

P-11	Restricted to professional users.
S-24/25	Avoid contact with skin and eyes.
S-26	In Case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S-38	In case of insufficient ventilation, wear suitable respiratory equipment.
S-45	In Case of accident or if you feel unwell, seek medical advice (show the label where possible). immediately
S-53	Avoid exposure - obtain special instructions before use.
S-60	This material and its container must be disposed of as hazardous waste.

## Other Information.

**User Notes:** Since emptied containers retain product residue, follow label warnings even after container is emptied. Labels should not be removed from containers until they have been cleaned and no product remains within. Not supplied for use by the general public. For further Health and Safety information contact: Health and Safety Officer.

**Revision Comments:** Classification, Packaging and Labelling of Chemicals: Chip 3 All sections. This Health & Safety Data Sheet has been extensively amended. Please check details carefully.

**Revision Date:** 01/07/02

**Revision No. Replaces SDS Issued:**

	05-06/04/98	
<b>R-Phrases (Full Text):</b>	R-45	May Cause Cancer.
	R-36/38	Irritating to eyes and skin
	R-52/53	Harmful to aquatic organisms,
may cause long-term aquatic environment.		
	R-67	Vapours may cause drowsiness and dizziness.



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**Safety Data Sheet Status:** Approved.

**Date:** 24/06/02

## Disclaimer

This information relates only to the specific material designated and may not be valid for such material used in combinations with any other materials or in any process. Such information is, to the best of the company's knowledge and belief, Accurate and reliable as of the date indicated. However No Warranty, Guarantee or Representation is made as to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability of such information for his/her own particular use.