

MATERIAL SAFETY DATA SHEET
CLEANER 28

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SLUYTER COMPANY LTD.

375 Steelcase Road East
Markham, Ontario L3R 1G3 Canada
Tel (905) 475-6011 Fax (905) 475-3119

SECTION 01: CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

MANUFACTURER-----SLUYTER COMPANY LTD.
375 Steelcase Road East
Markham, Ontario L3R 1G3
Canada
Tel (905) 475-6011
PRODUCT NAME-----CLEANER 28.
PRODUCT USES-----Cleaner and Degreaser.
CHEMICAL FAMILY-----Chlorinated Solvents.

SECTION 02: COMPOSITION / INFORMATION ON INGREDIENTS

| INGREDIENTS / % | CAS / TLV | LD/50, ROUTE, SPECIES | LC/50, ROUTE, SPECIES |
|-------------------|-----------|-----------------------|-----------------------|
| TRICHLOROETHYLENE | | | |
| 60 - 100 | 79-01-6 | 4920 mg/kg | 12500 ppm 4 Hours |
| | 50 ppm | Oral (Rat) | Inhalation (Rat) |

SECTION 03: HAZARDS IDENTIFICATION

ROUTE OF ENTRY:-----
SKIN CONTACT-----Can cause skin irritation, defatting and dermatitis.
SKIN ABSORPTION-----Can be absorbed through the skin resulting in toxic effects.
INHALATION-----See "EFFECTS OF CHRONIC EXPOSURE", below.
INHALATION CHRONIC-----Breathing of high vapour concentrations could cause dizziness, headache or even unconsciousness. May be anesthetic which could result in other central nervous system effects.
INGESTION-----Can cause gastro-intestinal irritation, nausea, vomiting and diarrhea. Small amounts of liquid aspirated into respiratory system could cause severe health effects. (e.g. Bronchopneumonia or Pulmonary Edema).
EYE CONTACT-----Irritant. May cause discomfort. May cause watering of the eyes. Vapours can cause irritation.
EFFECTS OF ACUTE EXPOSURE-----Levels in the range of 1000-2000 ppm may rapidly cause dizziness, drunkenness and irregular heart beats. Progressively higher levels or longer exposure may be an immediate hazard to health.
ADDITIONAL INFORMATION-----Alcohol consumed before or after exposure may increase adverse effects.
EFFECTS OF CHRONIC EXPOSURE-----May cause damage to the central nervous system. May cause nausea, headache, dizziness and drowsiness. Severe overexposure could cause coma or death. High levels have caused liver or kidney effects in laboratory animals. See "CARCINOGENICITY OF MATERIAL" heading under TOXICOLOGICAL INFORMATION in SECTION II

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SECTION 04: FIRST AID MEASURES

EYE CONTACT-----Check for and remove any contact lenses.
Immediately flush with water for a minimum
of 20 minutes and get medical attention.

SKIN CONTACT-----Remove contaminated clothing. Wash
affected area with water and soap. Seek
medical attention if irritation occurs or persists.

INHALATION-----Remove patient to fresh air. If not
breathing, trained personnel should
administer artificial respiration. Get
medical attention.

INGESTION-----Do NOT induce vomiting. Get immediate
medical attention.

ADDITIONAL INFORMATION-----Contact your local poison control centre.

SECTION 05: FIRE FIGHTING MEASURES

FLAMMABILITY-----Non-flammable.

UNDER WHAT CONDITIONS-----Open flames, welding arcs or other high
temperature sources can induce thermal
decomposition.

SPECIAL PROCEDURES-----A self-contained breathing apparatus is
required for fire fighting personnel. Use
water spray to cool fire exposed surfaces
and to protect personnel.

FLASH POINT (METHOD)-----None.

AUTO IGNITION TEMPERATURE-----420°C.

UPPER FLAMMABLE LIMIT (% VOL)-----8% @ 100°C.

LOWER FLAMMABLE LIMIT (% VOL)-----45% @ 100°C.

EXTINGUISHING MEDIA-----Dry chemical, alcohol foam and CO2
extinguishers.

HAZARDOUS COMBUSTION PRODUCTS-----Chlorine. Hydrogen Chloride. Phosgene.

SENSITIVITY TO MECHANICAL-----Not available.

IMPACT

SENSITIVITY TO STATIC-----Not available.

DISCHARGE

SECTION 06: ACCIDENTAL RELEASE MEASURES

LEAK/SPILL-----Ventilate. Remove all sources of ignition,
open flames, sparks and heaters. Wear
protective gear (See SECTION 8). Large
spills must be collected for
disposal. Small spills can be wiped. Use a
non-combustible absorbent inorganic
material. Prevent run-off into drains,
sewers and other waterways.

SECTION 07: HANDLING AND STORAGE

HANDLING PROCEDURES-----Avoid skin and eye contact. Avoid breathing
vapours. Use adequate ventilation. Keep away
from heat, sparks and open flame.

STORAGE NEEDS-----Store away from all sources of heat and
ignition. Store in well ventilated
area. Keep container closed and out of
reach from children and pets when not in use.

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SECTION 08: EXPOSURE CONTROLS / PERSONAL PROTECTION

PROTECTIVE EQUIPMENT:-----
EYE/TYPE-----Safety glasses.
RESPIRATORY/TYPE-----None required for normal use if adequate ventilation is maintained. If used indoors on a continuous basis or if the TLV is exceeded, the use of a cartridge type respirator (NIOSH/MSHA approved) is recommended.
GLOVES/ TYPE-----Wear impervious gloves (Neoprene or Rubber).
CLOTHING/TYPE-----Not applicable.
FOOTWEAR/TYPE-----Not applicable.
OTHER/TYPE-----Eye bath and safety shower.
VENTILATION REQUIREMENTS-----Natural or mechanical ventilation to keep the vapour concentrations below the TLV.

SECTION 09: PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE-----Liquid.
ODOUR-----Strong solvent odour.
SPECIFIC GRAVITY-----1.46 - 1.50.
ODOUR THRESHOLD (ppm)-----Not available.
VAPOUR PRESSURE-----60 mmHg @ 20°C.
VAPOUR DENSITY (AIR=1)-----4.50.
EVAPORATION RATE-----Not available.
BOILING POINT (deg C)-----87°C.
pH-----Not applicable.
SOLUBILITY IN WATER (% W/W)-----Not soluble.
COEFFICIENT OF WATER\OIL-----Not available.
DISTRIBUTION
VOLATILES (%)-----Not available.
FREEZING POINT-----Not available.
MELTING POINT (deg C)-----Not applicable.
MOLECULAR WEIGHT-----Not applicable.

SECTION 10: STABILITY AND REACTIVITY

INCOMPATIBILITY-----Aluminum and similar alloys. Strong acids. Metal Chlorides. Water. Oxidizing agents.
REACTIVITY CONDITIONS-----Excessive heat, sparks and open flame.
HAZARDOUS PRODUCTS OF-----Hydrogen Chloride. Chlorine. Phosgene.
DECOMPOSITION

SECTION 11: TOXICOLOGICAL INFORMATION

EXPOSURE LIMIT OF MATERIAL-----See "HAZARDOUS INGREDIENTS" in SECTION 2.
IRRITANCY OF MATERIAL-----Moderate.
SENSITIZING CAPABILITY OF-----Not available.
MATERIAL
CARCINOGENICITY OF MATERIAL-----A positive carcinogenic response has occurred only in mice given large doses of Trichloroethylene. Data suggests a no mutagenic mechanism for tumor formation implying that non toxic doses of this product should pose little or no carcinogenic hazard for humans. The National Cancer Institute has concluded from the results of a bioassay that Trichloroethylene is a liver carcinogen when given orally to mice. ACGIH (94-95)

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classifies it as "A5" - (Not suspected as a carcinogen to humans).
TERATOGENICITY-----Birth defects are unlikely. Exposures having no effect on mother should have no effect on fetus.
MUTAGENICITY-----Not available.
REPRODUCTIVE EFFECTS-----Animal studies data, do not suggest any reproductive hazards.
SYNERGISTIC MATERIALS-----Not available.

SECTION 12: ECOLOGICAL INFORMATION

ENVIRONMENTAL-----Not available. Can be dangerous if allowed to enter drinking water intakes. Product has an unaesthetic appearance and can be a nuisance. Do not contaminate domestic or irrigation water supplies, lakes, streams, ponds and rivers.
BIODEGRADABILITY-----Not available. The solvent portion of this product is biodegradable and vaporizes rapidly.

SECTION 13: DISPOSAL CONSIDERATIONS

WASTE DISPOSAL-----Spilled material and water rinses are classified as chemical waste. To be disposed of in accordance with current Local, Provincial and Federal regulations.

SECTION 14: TRANSPORT INFORMATION

T.D.G. CLASSIFICATION-----In containers up to 5 litres - shipped as CONSUMER COMMODITY. If shipment exceeds 500 kg in weight, shipped as CONSUMER COMMODITY - TRICHLOROETHYLENE SOLUTION) CLASS 6.1 (9.2).
In containers over 5 litres - TRICHLOROETHYLENE (SOLUTION) CLASS 6.1 (9.2) UN1710 P.G. III.

SECTION 15: REGULATORY INFORMATION

CPR COMPLIANCE-----This product has been classified in accordance with the hazard criteria of the CPR and the MSDS contains all the information required by the CPR.
WHMIS CLASSIFICATION-----Class D Div.1 Subdiv.B Class D Div.2 Subdiv.B.

SECTION 16: OTHER INFORMATION

IMPORTANT:-----The information on this Material Safety Data Sheet is furnished without warranty, expressed or implied. All the information appearing herein is based upon data obtained from manufacturers and/or recognized technical sources. While the information is believed to be accurate, we make no representations for the accuracy or sufficiency.