Material Safety Data Sheet
The Dow Chemical Company

Product Name: Rinse T1100

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The Dow Chemical Company encourages and expects you to read and understand the entire (M)SDS, as there is important information throughout the document. We expect you to follow the precautions identified in this document unless your use conditions would necessitate other appropriate methods or actions.

1. Product and Company Identification

Product Name
Rinse T1100

COMPANY IDENTIFICATION
The Dow Chemical Company
2030 Willard H. Dow Center
Midland, MI 48674
USA

For MSDS updates and Product Information: 800-258-2436

Prepared By: Prepared for use in Canada by EH&S, Product Regulatory Management Department.
450-652-1029
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Customer Information Number: 800-258-2436

EMERGENCY TELEPHONE NUMBER
24-Hour Emergency Contact: 989-636-4400
Local Emergency Contact: 519-339-3711

2. Hazards Identification

Emergency Overview
Color: Clear
Physical State: Liquid
Odor: Aromatic

Hazards of product:

CAUTION! May cause eye irritation. May cause skin irritation. May be harmful if inhaled. May cause respiratory tract irritation. May cause central nervous system effects. Aspiration hazard. Can enter lungs and cause damage. Combustible liquid and vapor. Isolate area. Vapor explosion hazard. Eliminate ignition sources. Vapors may travel a long distance; ignition and/or flash back may occur. Stay out of low areas. Keep upwind of spill.

Potential Health Effects

Eye Contact: May cause eye irritation. Vapor may cause eye irritation experienced as mild discomfort and redness.
Skin Contact: Brief contact may cause skin irritation with local redness. Prolonged contact may cause skin irritation with local redness. Repeated contact may cause skin burns. Symptoms may include pain, severe local redness, swelling, and tissue damage. May cause drying and flaking of the skin. May cause more severe response on covered skin (under clothing, gloves).
Skin Absorption: Prolonged skin contact is unlikely to result in absorption of harmful amounts.
Inhalation: Vapor concentrations are attainable which could be hazardous on single exposure. May cause respiratory irritation and central nervous system depression.
Ingestion: Low toxicity if swallowed. Small amounts swallowed incidentally as a result of normal handling operations are not likely to cause injury; however, swallowing larger amounts may cause injury. Aspiration into the lungs may occur during ingestion or vomiting, causing lung damage or even death due to chemical pneumonia.
Effects of Repeated Exposure: In animals, effects have been reported on the following organs: Liver. Blood.
Birth Defects/Developmental Effects: Did not cause birth defects in laboratory animals. Has been toxic to the fetus in lab animals at doses nontoxic to the mother.
Reproductive Effects: In laboratory animal studies, effects on reproduction have been seen only at doses that produced significant toxicity to the parent animals.

3. Composition/information on ingredients

Component	CAS #	Amount W/W
1,3,5-Trimethylbenzene	108-67-8	>= 98.0 - <= 100.0 %
1,2,4-Trimethylbenzene	95-63-6	<= 1.0 %
C9 Aromatic Isomers		<= 1.0 %

Amounts are presented as percentages by weight.

4. First-aid measures

Eye Contact: Flush eyes thoroughly with water for several minutes. Remove contact lenses after the initial 1-2 minutes and continue flushing for several additional minutes. If effects occur, consult a physician, preferably an ophthalmologist.
Skin Contact: Wash skin with plenty of water.
Inhalation: Move person to fresh air. If not breathing, give artificial respiration; if by mouth to mouth use rescuer protection (pocket mask, etc). If breathing is difficult, oxygen should be administered by qualified personnel. Call a physician or transport to a medical facility.
Ingestion: Do not induce vomiting. Call a physician and/or transport to emergency facility immediately.
Notes to Physician: If lavage is performed, suggest endotracheal and/or esophageal control. Danger from lung aspiration must be weighed against toxicity when considering emptying the stomach. The decision of whether to induce vomiting or not should be made by a physician. Maintain adequate ventilation and oxygenation of the patient. If burn is present, treat as any thermal burn, after

decontamination. No specific antidote. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient.
Medical Conditions Aggravated by Exposure: Skin contact may aggravate preexisting dermatitis.

5. Fire Fighting Measures

Extinguishing Media: Water fog or fine spray. Dry chemical fire extinguishers. Carbon dioxide fire extinguishers. Foam. General purpose synthetic foams (including AFFF type) or protein foams are preferred if available. Alcohol resistant foams (ATC type) may function.
Fire Fighting Procedures: Keep people away. Isolate fire and deny unnecessary entry. Stay upwind. Keep out of low areas where gases (fumes) can accumulate. Use water spray to cool fire exposed containers and fire affected zone until fire is out and danger of reignition has passed. Do not use direct water stream. May spread fire. Eliminate ignition sources. Burning liquids may be moved by flushing with water to protect personnel and minimize property damage. Avoid accumulation of water. Product may be carried across water surface spreading fire or contacting an ignition source. Contain fire water run-off if possible. Fire water run-off, if not contained, may cause environmental damage. Review the "Accidental Release Measures" and the "Ecological Information" sections of this (M)SDS.
Special Protective Equipment for Firefighters: Wear positive-pressure self-contained breathing apparatus (SCBA) and protective fire fighting clothing (includes fire fighting helmet, coat, trousers, boots, and gloves). Avoid contact with this material during fire fighting operations. If contact is likely, change to full chemical resistant fire fighting clothing with self-contained breathing apparatus. If this is not available, wear full chemical resistant clothing with self-contained breathing apparatus and fight fire from a remote location. For protective equipment in post-fire or non-fire clean-up situations, refer to the relevant sections.
Unusual Fire and Explosion Hazards: Violent steam generation or eruption may occur upon application of direct water stream to hot liquids. When product is stored in closed containers, a flammable atmosphere can develop. Electrically ground and bond all equipment. Flammable mixtures of this product are readily ignited even by static discharge. Vapors are heavier than air and may travel a long distance and accumulate in low lying areas. Ignition and/or flash back may occur. Dense smoke is produced when product burns.
Hazardous Combustion Products: During a fire, smoke may contain the original material in addition to combustion products of varying composition which may be toxic and/or irritating. Combustion products may include and are not limited to: Carbon monoxide. Carbon dioxide.

See Section 9 for related Physical Properties

6. Accidental Release Measures

Steps to be Taken if Material is Released or Spilled: Pump with explosion-proof equipment. If available, use foam to smother or suppress. Contain spilled material if possible. Use non-sparking tools in cleanup operations. Absorb with materials such as: Sand. Sawdust. See Section 13, Disposal Considerations, for additional information.
Personal Precautions: Isolate area. Vapor explosion hazard. Keep out of sewers. Keep upwind of spill. Ventilate area of leak or spill. Keep unnecessary and unprotected personnel from entering the area. No smoking in area. Eliminate all sources of ignition in vicinity of spill or released vapor to avoid fire or explosion. Ground and bond all containers and handling equipment. See Section 10 for more specific information. Refer to Section 7, Handling, for additional precautionary measures. Use appropriate safety equipment. For additional information, refer to Section 8, Exposure Controls and Personal Protection.
Environmental Precautions: Material may float on water and any runoff may create an explosion or fire hazard if ignited. Prevent from entering into soil, ditches, sewers, waterways and/or groundwater. See Section 12, Ecological Information.

7. Handling and Storage

Handling

General Handling: Avoid contact with eyes, skin, and clothing. Avoid breathing vapor. Do not swallow. Wash thoroughly after handling. Keep away from heat, sparks and flame. Keep container closed. Use with adequate ventilation. No smoking, open flames or sources of ignition in handling and storage area. Vapors are heavier than air and may travel a long distance and accumulate in low lying areas. Ignition and/or flash back may occur. Electrically ground and bond all equipment. Use of non-sparking or explosion-proof equipment may be necessary, depending upon the type of operation. Containers, even those that have been emptied, can contain vapors. Do not cut, drill, grind, weld, or perform similar operations on or near empty containers. See Section 8, EXPOSURE CONTROLS AND PERSONAL PROTECTION.

Storage

Minimize sources of ignition, such as static build-up, heat, spark or flame. See Section 10 for more specific information.

To maintain product quality, recommended storage temperature is < -15 °C

8. Exposure Controls / Personal Protection

Exposure Limits

Component	List	Type	Value
1,3,5-Trimethylbenzene	OEL (QUE)	TWA	123 mg/m3 25 ppm
	CAD ON OEL	TWA	123 mg/m3 25 ppm
	ACGIH	TWA	25 ppm
	CAD AB OEL	TWA	123 mg/m3 25 ppm
	CAD BC OEL	TWA	25 ppm

Consult local authorities for recommended exposure limits.

Personal Protection

Eye/Face Protection: Use chemical goggles. If exposure causes eye discomfort, use a full-face respirator.

Skin Protection: Use protective clothing chemically resistant to this material. Selection of specific items such as face shield, boots, apron, or full body suit will depend on the task. Safety shower should be located in immediate work area. Remove contaminated clothing immediately, wash skin area with soap and water, and launder clothing before reuse or dispose of properly. Items which cannot be decontaminated, such as shoes, belts and watchbands, should be removed and disposed of properly.

Hand protection: Use gloves chemically resistant to this material. Examples of preferred glove barrier materials include: Polyethylene. Ethyl vinyl alcohol laminate ("EVAL"). Polyvinyl alcohol ("PVA"). Polyvinyl chloride ("PVC" or "vinyl"). Styrene/butadiene rubber. Viton. Examples of acceptable glove barrier materials include: Butyl rubber. Chlorinated polyethylene. Natural rubber ("latex"). Neoprene. Nitrile/butadiene rubber ("nitrile" or "NBR"). NOTICE: The selection of a specific glove for a particular application and duration of use in a workplace should also take into account all relevant workplace factors such as, but not limited to: Other chemicals which may be handled, physical requirements (cut/puncture protection, dexterity, thermal protection), potential body reactions to glove materials, as well as the instructions/specifications provided by the glove supplier.

Respiratory Protection: Atmospheric levels should be maintained below the exposure guideline. When respiratory protection is required, use an approved air-purifying or positive-pressure supplied-air respirator depending on the potential airborne concentration. For emergency and other conditions where the exposure guideline may be exceeded, use an approved positive-pressure self-contained breathing apparatus or positive-pressure air line with auxiliary self-contained air supply. In confined or poorly ventilated areas, use an approved self-contained breathing apparatus or positive pressure air

line with auxiliary self-contained air supply. The following should be effective types of air-purifying respirators: Organic vapor cartridge.
Ingestion: Avoid ingestion of even very small amounts; do not consume or store food or tobacco in the work area; wash hands and face before smoking or eating.

Engineering Controls
Ventilation: Provide general and/or local exhaust ventilation to control airborne levels below the exposure guidelines. Use only with adequate ventilation.

9. Physical and Chemical Properties

Physical State	Liquid
Color	Clear
Odor	Aromatic
Flash Point - Closed Cup	44 °C *Setaflash Closed Cup*
Flammable Limits In Air	**Lower**: 0.88 %(V) *Literature* **Upper**: 6.1 %(V) *Literature*
Autoignition Temperature	550 °C *Literature*
Vapor Pressure	332 Pa @ 25 °C *Supplier*
Boiling Point (760 mmHg)	162 °C *Literature* .
Vapor Density (air = 1)	4.1 *Supplier*
Specific Gravity (H2O = 1)	0.864 *Literature*
Freezing Point	-49 °C *Literature*
Melting Point	No test data available
Solubility in Water (by weight)	0.1 % *Literature*
pH	Not applicable
Dynamic Viscosity	0.71 mPa.s @ 20 °C *Literature*

10. Stability and Reactivity

Stability/Instability
Stable under recommended storage conditions. See Storage, Section 7. Thermally stable at typical use temperatures.
Conditions to Avoid: Exposure to elevated temperatures can cause product to decompose. Avoid static discharge.

Incompatible Materials: Avoid contact with oxidizing materials.

Hazardous Polymerization
Will not occur.

Thermal Decomposition
Decomposition products depend upon temperature, air supply and the presence of other materials.

11. Toxicological Information

Acute Toxicity
Ingestion
For the major component(s): LD50, Rat > 5,000 mg/kg
Skin Absorption
The dermal LD50 has not been determined.
Repeated Dose Toxicity
In animals, effects have been reported on the following organs: Liver. Blood.

Developmental Toxicity
Did not cause birth defects in laboratory animals. Has been toxic to the fetus in lab animals at doses nontoxic to the mother.

Reproductive Toxicity
In laboratory animal studies, effects on reproduction have been seen only at doses that produced significant toxicity to the parent animals.

Genetic Toxicology
In vitro genetic toxicity studies were negative. Animal genetic toxicity studies were negative.

12. Ecological Information

CHEMICAL FATE

Data for Component: **1,3,5-Trimethylbenzene**

Movement & Partitioning
Bioconcentration potential is moderate (BCF between 100 and 3000 or Log Pow between 3 and 5). Potential for mobility in soil is low (Koc between 500 and 2000).
Henry's Law Constant (H): 1.97E-2 atm*m3/mole; 25 °C Estimated
Partition coefficient, n-octanol/water (log Pow): 3.42 Measured
Partition coefficient, soil organic carbon/water (Koc): 700 Estimated
Bioconcentration Factor (BCF): 23 - 342; fish; Measured

Persistence and Degradability
Material is not readily biodegradable according to OECD/EC guidelines. Biodegradation rate may increase in soil and/or water with acclimation.

Indirect Photodegradation with OH Radicals

Rate Constant	Atmospheric Half-life	Method
3.51E-11 cm3/s	3.7 h	Estimated

OECD Biodegradation Tests:

Biodegradation	Exposure Time	Method
0 %	28 d	OECD 301C Test

Biological oxygen demand (BOD):

BOD 5	BOD 10	BOD 20	BOD 28
3.1 %			

Theoretical Oxygen Demand: 3.19 mg/mg

Data for Component: **1,2,4-Trimethylbenzene**

Movement & Partitioning
Bioconcentration potential is moderate (BCF between 100 and 3000 or Log Pow between 3 and 5). Potential for mobility in soil is low (Koc between 500 and 2000).

Persistence and Degradability
Material is not readily biodegradable according to OECD/EC guidelines. Biodegradation rate may increase in soil and/or water with acclimation.

ECOTOXICITY

Data for Component: **1,3,5-Trimethylbenzene**

Material is moderately toxic to aquatic organisms on an acute basis (LC50/EC50 between 1 and 10 mg/L in most sensitive species tested).

Fish Acute & Prolonged Toxicity
LC50, Japanese medaka (Oryzias latipes): 8.6 mg/l
LC50, goldfish (Carassius auratus), flow-through, 96 h: 12.52 mg/l
Aquatic Invertebrate Acute Toxicity
LC50, water flea Daphnia magna: 50 mg/l
EC50, water flea Daphnia magna, static, 24 h, immobilization: 50 mg/l

Aquatic Plant Toxicity
EC50, alga Scenedesmus sp., biomass growth inhibition, 48 h: 25 mg/l

Data for Component: **1,2,4-Trimethylbenzene**

Material is moderately toxic to aquatic organisms on an acute basis (LC50/EC50 between 1 and 10 mg/L in most sensitive species tested).

Fish Acute & Prolonged Toxicity
LC50, fathead minnow (Pimephales promelas): 7.7 mg/l
LC50, rainbow trout (Oncorhynchus mykiss), static, 24 h: 5 mg/l
Aquatic Invertebrate Acute Toxicity
EC50, water flea Daphnia magna, 48 h: 3.6 mg/l
LC50, grass shrimp (Palaemonetes pugio), 96 h, survival: 5.4 mg/l

13. Disposal Considerations

DO NOT DUMP INTO ANY SEWERS, ON THE GROUND, OR INTO ANY BODY OF WATER. All disposal practices must be in compliance with all Federal, State/Provincial and local laws and regulations. Regulations may vary in different locations. Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator. DOW HAS NO CONTROL OVER THE MANAGEMENT PRACTICES OR MANUFACTURING PROCESSES OF PARTIES HANDLING OR USING THIS MATERIAL. THE INFORMATION PRESENTED HERE PERTAINS ONLY TO THE PRODUCT AS SHIPPED IN ITS INTENDED CONDITION AS DESCRIBED IN MSDS SECTION: Composition Information. FOR UNUSED & UNCONTAMINATED PRODUCT, the preferred options include sending to a licensed, permitted: Recycler. Reclaimer. Incinerator or other thermal destruction device. As a service to its customers, Dow can provide names of information resources to help identify waste management companies and other facilities which recycle, reprocess or manage chemicals or plastics, and that manage used drums. Telephone Dow's Customer Information Group at 1-800-258-2436 or 1-989-832-1556 (U.S.), or 1-800-331-6451 (Canada) for further details.

14. Transport Information

TDG Small container
Proper Shipping Name: 1,3,5-TRIMETHYLBENZENE
Hazard Class: 3 **ID Number:** UN2325 **Packing Group:** PG III

TDG Large container
Proper Shipping Name: 1,3,5-TRIMETHYLBENZENE
Hazard Class: 3 **ID Number:** UN2325 **Packing Group:** PG III

IMDG
Proper Shipping Name: 1,3,5-TRIMETHYLBENZENE
Hazard Class: 3 **ID Number:** UN2325 **Packing Group:** PG III
EMS Number: F-E,S-D

ICAO/IATA
Proper Shipping Name: 1,3,5-TRIMETHYLBENZENE
Hazard Class: 3 **ID Number:** UN2325 **Packing Group:** PG III

15. Regulatory Information

US. Toxic Substances Control Act
All components of this product are on the TSCA Inventory or are exempt from TSCA Inventory requirements under 40 CFR 720.30

European Inventory of Existing Commercial Chemical Substances (EINECS)
This product is on the EINECS inventory.
CEPA - Domestic Substances List (DSL)
All substances contained in this product are listed on the Canadian Domestic Substances List (DSL) or are not required to be listed.

Hazardous Products Act Information: CPR Compliance

This product has been classified in accordance with the hazard criteria of the Canadian Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

Hazardous Products Act Information: WHMIS Classification

B3	Combustible Liquid with a Flash Point of 37.8°C or more but less than 93.3°C
D2B	Eye or Skin Irritant

Hazardous Products Act Information: Hazardous Ingredients
This product contains the following ingredients which are Controlled Products and/or are on the Ingredient Disclosure List (Canadian HPA Section 13 and 14).

Component	CAS #	Amount W/W
1,3,5-Trimethylbenzene	108-67-8	98.5%

16. Other Information

Recommended Uses and Restrictions

Rinsing and cleaning solvent.

Revision

Identification Number: 81437 / 1001 / Issue Date 2007.03.21 / Version: 3.0
Most recent revision(s) are noted by the bold, double bars in left-hand margin throughout this document.

Legend

N/A	Not available
W/W	Weight/Weight
OEL	Occupational Exposure Limit
STEL	Short Term Exposure Limit
TWA	Time Weighted Average
ACGIH	American Conference of Governmental Industrial Hygienists, Inc.
DOW IHG	Dow Industrial Hygiene Guideline
WEEL	Workplace Environmental Exposure Level
HAZ_DES	Hazard Designation
VOL/VOL	Volume/Volume

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