CJ Products, Inc.
129 W. Susquehanna St.
Allentown, PA 18103
610-797-2874

MSDS Information Sheets

To All CJ Products, Inc. Customers:

With our ever increasing awareness and concern for the safety of the materials we use and how they effect our environment, CJ Products is making available to it's customers the information contained in the Material Safety Data Sheet for Triton X-100, the active ingredient in CJ's Flux Remover.

Keep in mind that the data provided is for a 100% concentration of Triton X-100. The actual concentration in CJ's is 12%. These MSDS sheets are the most up to date info from Dow Corning Chemical Co.

We thank you for your interest and use of our product, CJ's Flux Remover. Don't hesitate to contact us if we can be of further assistance.

Sincerely,
Carlene Morrow

Material Safety Data Sheet
The Dow Chemical Company

Product Name: TRITON(TM) X-100 SURFACTANT.

Issue Date: 06/28/2007
Print Date: 06 May 2008

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
TRITON(TM) X-100 SURFACTANT.

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

Customer Information Number: 800-258-2436

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

2. Hazards Identification

Emergency Overview
Color: Yellow
Physical State: Liquid
Odor: Mild
Hazards of product:

DANGER! Causes severe eye burns. Keep upwind of spill. May cause skin irritation. May be harmful if absorbed through skin. May be harmful if swallowed. Aspiration hazard. Can enter lungs and cause damage.

OSHA Hazard Communication Standard
This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

Potential Health Effects
Eye Contact: May cause severe irritation with corneal injury which may result in permanent impairment of vision, even blindness. Chemical burns may occur. Mist may cause eye irritation.

Skin Contact: Brief contact is essentially nonirritating to skin. Prolonged contact may cause moderate skin irritation with local redness. Repeated contact may cause moderate skin irritation with local redness.
Skin Absorption: Prolonged skin contact is unlikely to result in absorption of harmful amounts. Similar materials have been shown to cause lung effects following contact with the skin of rabbits.
Inhalation: At room temperature, exposure to vapor is minimal due to low volatility; single exposure is not likely to be hazardous. Mist may cause irritation of upper respiratory tract (nose and throat).
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.
Birth Defects/Developmental Effects: Has been toxic to the fetus in lab animals at doses toxic to the mother. These effects were only observed at exaggerated doses.

3. Composition Information

Component	CAS #	Amount
Polyethylene glycol octylphenyl ether	9036-19-5	>= 97.0 %
Poly(ethylene oxide)	25322-68-3	<= 3.0 %

4. First-aid measures

Eye Contact: Wash immediately and continuously with flowing water for at least 30 minutes. Remove contact lenses after the first 5 minutes and continue washing. Obtain prompt medical consultation, preferably from an ophthalmologist.
Skin Contact: Wash skin with plenty of water.
Inhalation: Move person to fresh air; if effects occur, consult a physician.
Ingestion: Do not induce vomiting. Call a physician and/or transport to emergency facility immediately.
Notes to Physician: The decision of whether to induce vomiting or not should be made by a 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. Chemical eye burns may require extended irrigation. Obtain prompt consultation, preferably from an ophthalmologist. No specific antidote. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient.

5. Fire Fighting Measures

Extinguishing Media: Water fog or fine spray. Dry chemical fire extinguishers. Carbon dioxide fire extinguishers. Foam. Do not use direct water stream. May spread fire. Alcohol resistant foams (ATC type) are preferred. General purpose synthetic foams (including AFFF) or protein foams may function, but will be less effective.
Fire Fighting Procedures: Keep people away. Isolate fire and deny unnecessary entry. Use water spray to cool fire exposed containers and fire affected zone until fire is out and danger of reignition has passed. Fight fire from protected location or safe distance. Consider the use of unmanned hose holders or monitor nozzles. Immediately withdraw all personnel from the area in case of rising sound from venting safety device or discoloration of the container. Burning liquids may be extinguished by dilution with water. Do not use direct water stream. May spread fire. Move container from fire area if this is possible without hazard. Burning liquids may be moved by flushing with water to protect personnel and minimize property damage.
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). If protective equipment is not available or not used, fight fire from a protected location or safe distance.

Unusual Fire and Explosion Hazards: Container may rupture from gas generation in a fire situation. Violent steam generation or eruption may occur upon application of direct water stream to hot liquids.
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.

6. Accidental Release Measures

Steps to be Taken if Material is Released or Spilled: Contain spilled material if possible. Absorb with materials such as: Sand. Dirt. Collect in suitable and properly labeled containers. See Section 13, Disposal Considerations, for additional information. Do not use water for cleanup.
Personal Precautions: Evacuate area. Refer to Section 7, Handling, for additional precautionary measures. Only trained and properly protected personnel must be involved in clean-up operations. Spilled material may cause a slipping hazard. Use appropriate safety equipment. For additional information, refer to Section 8, Exposure Controls and Personal Protection.
Environmental Precautions: Prevent from entering into soil, ditches, sewers, waterways and/or groundwater. See Section 12, Ecological Information.

7. Handling and Storage

Handling
General Handling: Do not get in eyes. Avoid breathing vapor. Avoid contact with eyes, skin, and clothing. Do not swallow. Keep container closed. Use with adequate ventilation. Wash thoroughly after handling. Spills of these organic materials on hot fibrous insulations may lead to lowering of the autoignition temperatures possibly resulting in spontaneous combustion.

Storage
No specific requirements.

Shelf life: Use within
24 Months

8. Exposure Controls / Personal Protection

Exposure Limits

Component	List	Type	Value
Poly(ethylene oxide)	WEEL	TWA Particulate.	10 mg/m3

Personal Protection
Eye/Face Protection: Use chemical goggles. Eye wash fountain should be located in immediate work area.
Skin Protection: No precautions other than clean body-covering clothing should be needed.
Hand protection: Chemical protective gloves should not be needed when handling this material. Consistent with general hygienic practice for any material, skin contact should be minimized.
Respiratory Protection: Atmospheric levels should be maintained below the exposure guideline. When respiratory protection is required for certain operations, use an approved air-purifying respirator. In dusty or misty atmospheres, use an approved particulate respirator. The following should be effective types of air-purifying respirators: Organic vapor cartridge with a particulate pre-filter.
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.

9. Physical and Chemical Properties

Physical State	Liquid
Color	Yellow
Odor	Mild
Flash Point - Closed Cup	251 °C (484 °F) *ASTM D93*
Flash Point - Open Cup	290 °C (554 °F) *ASTM D92*
Flammable Limits In Air	**Lower**: No test data available **Upper**: No test data available
Autoignition Temperature	No test data available
Vapor Pressure	< 0.01 mmHg @ 20 °C *Calculated*
Boiling Point (760 mmHg)	> 200 °C (> 392 °F) *Calculated* .
Vapor Density (air = 1)	>1 *Calculated*
Specific Gravity (H2O = 1)	1.061 20 °C/20 °C *Calculated*
Freezing Point	See Pour Point
Melting Point	Not applicable to liquids
Solubility in Water (by weight)	Completely soluble but some compositions may form gels
pH	6 *Calculated* (5% aqueous solution)
Molecular Weight	624 g/mol *Calculated*
Evaporation Rate (Butyl Acetate = 1)	<0.01 *Calculated*
Kinematic Viscosity	226 cSt *Calculated*
Pour point	2 °C (36 °F) *Calculated*

10. Stability and Reactivity

Stability/Instability
Thermally stable at typical use temperatures.
Conditions to Avoid: Do not distill to dryness. Product can oxidize at elevated temperatures. Generation of gas during decomposition can cause pressure in closed systems.

Incompatible Materials: Avoid contact with: Strong acids. Strong oxidizers.

Hazardous Polymerization
Will not occur.

Thermal Decomposition
Decomposition products depend upon temperature, air supply and the presence of other materials. Decomposition products can include and are not limited to: Aldehydes. Ketones. Organic acids.

11. Toxicological Information

Acute Toxicity
Ingestion
Typical for this family of materials. LD50, Rat 1,900 - 5,000 mg/kg
Skin Absorption
Typical for this family of materials. LD50, Rabbit > 3,000 mg/kg
Sensitization
Skin

Did not cause allergic skin reactions when tested in humans.

Developmental Toxicity

Has been toxic to the fetus in lab animals at doses toxic to the mother. These effects were only observed at exaggerated doses. Did not cause birth defects in laboratory animals.

12. Ecological Information

CHEMICAL FATE

Movement & Partitioning

No relevant information found.

Persistence and Degradability

For this family of materials: Material is readily biodegradable. Passes OECD test(s) for ready biodegradability.

OECD Biodegradation Tests: For this family of materials:

Biodegradation	Exposure Time	Method
> 60 %	28 d	OECD 301B Test

Chemical Oxygen Demand: 1.71 - 2.18 mg/mg

Theoretical Oxygen Demand: 2.05 - 2.61 mg/mg

ECOTOXICITY

For this family of materials: 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

For this family of materials: LC50, fathead minnow (Pimephales promelas), 96 h: 4 - 8.9 mg/l

Aquatic Invertebrate Acute Toxicity

For this family of materials: EC50, water flea Daphnia magna, 48 h: 18 - 26 mg/l

Toxicity to Micro-organisms

For this family of materials: IC50; bacteria, 16 h: 5,000 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: Incinerator or other thermal destruction device. Waste water treatment system. 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

DOT Non-Bulk

NOT REGULATED

DOT Bulk

NOT REGULATED

IMDG
NOT REGULATED

ICAO/IATA
NOT REGULATED

This information is not intended to convey all specific regulatory or operational requirements/information relating to this product. Additional transportation system information can be obtained through an authorized sales or customer service representative. It is the responsibility of the transporting organization to follow all applicable laws, regulations and rules relating to the transportation of the material.

15. Regulatory Information

OSHA Hazard Communication Standard
This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) Sections 311 and 312

Immediate (Acute) Health Hazard	Yes
Delayed (Chronic) Health Hazard	Yes
Fire Hazard	No
Reactive Hazard	No
Sudden Release of Pressure Hazard	No

Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) Section 313
To the best of our knowledge, this product does not contain chemicals at levels which require reporting under this statute.

Pennsylvania (Worker and Community Right-To-Know Act): Pennsylvania Hazardous Substances List and/or Pennsylvania Environmental Hazardous Substance List:
To the best of our knowledge, this product does not contain chemicals at levels which require reporting under this statute.

Pennsylvania (Worker and Community Right-To-Know Act): Pennsylvania Special Hazardous Substances List:
To the best of our knowledge, this product does not contain chemicals at levels which require reporting under this statute.

Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) Section 103
This product contains the following substances which are subject to CERCLA Section 103 reporting requirements and which are listed in 40 CFR 302.4.

Component	CAS #	Amount
Phosphoric acid, disodium salt	7558-79-4	<= 50.0 PPM
1,4-Dioxane	123-91-1	<= 20.0 PPM
Ethylene oxide	75-21-8	<= 10.0 PPM
Acetaldehyde	75-07-0	<= 5.0 PPM
Formaldehyde	50-00-0	<= 5.0 PPM

US. EPA Emergency Planning and Community Right-To-Know Act (EPCRA) SARA Title III Section 302 Extremely Hazardous Substance (40 CFR 355, Appendix A)
To the best of our knowledge, this product does not contain chemicals at levels which require reporting under this statute.

California Proposition 65 (Safe Drinking Water and Toxic Enforcement Act of 1986)
WARNING: This product contains a chemical(s) known to the State of California to cause cancer.

Component	CAS #	Amount
1,4-Dioxane	123-91-1	<= 20.0 PPM
Ethylene oxide	75-21-8	<= 10.0 PPM
Acetaldehyde	75-07-0	<= 5.0 PPM
Formaldehyde	50-00-0	<= 5.0 PPM

California Proposition 65 (Safe Drinking Water and Toxic Enforcement Act of 1986)
WARNING: This product contains a chemical(s) known to the State of California to cause birth defects or other reproductive harm.

Component	CAS #	Amount
Ethylene oxide	75-21-8	<= 10.0 PPM

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
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.
European Inventory of Existing Commercial Chemical Substances (EINECS)
The components of this product are on the EINECS inventory or are exempt from inventory requirements.

16. Other Information

Product Literature
Additional information on this and other Dow products may be obtained by visiting our web page at www.dow.com. Additional information on this product may be obtained by calling your Dow Chemical Company sales or customer service contact. Ask for a product brochure.

Hazard Rating System

NFPA	Health	Fire	Reactivity
	3	1	0

Recommended Uses and Restrictions
Multi-purpose surfactant. Dow recommends that you use this product in a manner consistent with the listed use. If your intended use is not consistent with Dow's stated use, please contact Dow's Customer Information Group.

Revision
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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
Action Level	A value set by OSHA that is lower than the PEL which will trigger the need for activities such as exposure monitoring and medical surveillance if exceeded.

The Dow Chemical Company urges each customer or recipient of this (M)SDS to study it carefully and consult appropriate expertise, as necessary or appropriate, to become aware of and understand the data contained in this (M)SDS and any hazards associated with the product. The information herein is provided in good faith and believed to be accurate as of the effective date shown above. However, no warranty, express or implied, is given. Regulatory requirements are subject to change and may differ between various locations. It is the buyer's/user's responsibility to ensure that his activities comply with all federal, state, provincial or local laws. The information presented here pertains only to the product as shipped. Since conditions for use of the product are not under the control of the manufacturer, it is the buyer's/user's duty to determine the conditions necessary for the safe use of this product. Due to the proliferation of sources for information such as manufacturer-specific (M)SDSs, we are not and cannot be responsible for (M)SDSs obtained from any source other than ourselves. If you have obtained an (M)SDS from another source or if you are not sure that the (M)SDS you have is current, please contact us for the most current version.