

## A01363 MST ELECTRONICS CLEANER 16n14

Version 1.0

Revision Date 05/20/2015

Print Date 09/03/2015

### SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Material name : A01363 MST ELECTRONICS CLEANER 16n14

Material number : 00000000001048499

#### Manufacturer or supplier's details

Company : Zep Inc.

Address : 1310 Seaboard Industrial Blvd., NW  
Atlanta, GA 30318

Telephone : 404-352-1680

#### Emergency telephone numbers

<b>For SDS Information</b>	: Compliance Services 1-877-428-9937
<b>For a Medical Emergency</b>	: 877-541-2016 Toll Free - All Calls Recorded
<b>For a Transportation Emergency</b>	: CHEMTREC: 800-424-9300 - All Calls Recorded. In the District of Columbia 202-483-7616

### SECTION 2. HAZARDS IDENTIFICATION

#### Emergency Overview

Appearance	Aerosol containing a liquefied gas
Colour	colourless
Odour	solvent-like

#### GHS Classification

Flammable aerosols : Category 2  
 Gases under pressure : Liquefied gas  
 Acute toxicity (Inhalation) : Category 4  
 Skin irritation : Category 2  
 Eye irritation : Category 2A

#### GHS Label element

Hazard pictograms :



Signal word : Warning

Hazard statements : H223 Flammable aerosol.  
 H280 Contains gas under pressure; may explode if heated.  
 H315 Causes skin irritation.  
 H319 Causes serious eye irritation.  
 H332 Harmful if inhaled.

Precautionary statements : **Prevention:**  
 P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.  
 P211 Do not spray on an open flame or other ignition source.

## A01363 MST ELECTRONICS CLEANER 16n14

Version 1.0

Revision Date 05/20/2015

Print Date 09/03/2015

P251 Pressurized container: Do not pierce or burn, even after use.

P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.

P264 Wash skin thoroughly after handling.

P271 Use only outdoors or in a well-ventilated area.

P280 Wear eye protection/ face protection.

P280 Wear protective gloves.

**Response:**

P302 + P352 IF ON SKIN: Wash with plenty of soap and water.

P304 + P340 + P312 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/ physician if you feel unwell.

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P332 + P313 If skin irritation occurs: Get medical advice/ attention.

P337 + P313 If eye irritation persists: Get medical advice/ attention.

P362 Take off contaminated clothing and wash before reuse.

**Storage:**

P410 + P412 Protect from sunlight. Do not expose to temperatures exceeding 50 °C/ 122 °F.

**Potential Health Effects****Carcinogenicity:****IARC**

No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

**ACGIH**

No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

**OSHA**

No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

**NTP**

No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

**SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS**

Substance / Mixture : Mixture

**Hazardous components**

Chemical Name	CAS-No.	Concentration [%]
norflurane	811-97-2	>= 50 - < 70
trans-dichloroethylene	156-60-5	>= 20 - < 30
ethanol	64-17-5	>= 1 - < 5
methanol	67-56-1	>= 0.1 - < 1

**SECTION 4. FIRST AID MEASURES**

**A01363 MST ELECTRONICS CLEANER 16n14**

Version 1.0

Revision Date 05/20/2015

Print Date 09/03/2015

---

- General advice : Move out of dangerous area.  
Show this safety data sheet to the doctor in attendance.  
Do not leave the victim unattended.
- If inhaled : Consult a physician after significant exposure.  
If unconscious place in recovery position and seek medical advice.
- In case of skin contact : If skin irritation persists, call a physician.  
Wash off immediately with plenty of water for at least 15 minutes.  
If on clothes, remove clothes.  
Wash clothing before reuse.
- In case of eye contact : Remove contact lenses.  
Protect unharmed eye.  
Keep eye wide open while rinsing.  
If eye irritation persists, consult a specialist.  
Rinse immediately with plenty of water for at least 15 minutes.
- If swallowed : Keep respiratory tract clear.  
Never give anything by mouth to an unconscious person.  
If symptoms persist, call a physician.  
DO NOT induce vomiting unless directed to do so by a physician or poison control center.  
Take victim immediately to hospital.
- 

**SECTION 5. FIREFIGHTING MEASURES**

- Suitable extinguishing media : Dry chemical  
Water spray jet  
Carbon dioxide (CO<sub>2</sub>)  
Alcohol-resistant foam
- Unsuitable extinguishing media : High volume water jet
- Specific hazards during firefighting : Do not allow run-off from fire fighting to enter drains or water courses.
- Hazardous combustion products : Carbon dioxide (CO<sub>2</sub>)  
Carbon monoxide  
Smoke
- Specific extinguishing methods : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
- Further information : Collect contaminated fire extinguishing water separately. This must not be discharged into drains.  
Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.  
For safety reasons in case of fire, cans should be stored separately in closed containments.  
Use a water spray to cool fully closed containers.
- Special protective equipment for firefighters : Wear self-contained breathing apparatus for firefighting if necessary.
-

## A01363 MST ELECTRONICS CLEANER 16n14

Version 1.0

Revision Date 05/20/2015

Print Date 09/03/2015

### SECTION 6. ACCIDENTAL RELEASE MEASURES

- Personal precautions, protective equipment and emergency procedures : Use personal protective equipment.  
Ensure adequate ventilation.  
Remove all sources of ignition.  
Evacuate personnel to safe areas.  
Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.
- Environmental precautions : Prevent product from entering drains.  
Prevent further leakage or spillage if safe to do so.  
If the product contaminates rivers and lakes or drains inform respective authorities.
- Methods and materials for containment and cleaning up : Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).  
Sweep up or vacuum up spillage and collect in suitable container for disposal.

### SECTION 7. HANDLING AND STORAGE

- Advice on safe handling : Avoid exposure - obtain special instructions before use.  
Avoid contact with skin and eyes.  
For personal protection see section 8.  
Smoking, eating and drinking should be prohibited in the application area.  
Do not breathe vapours or spray mist.  
Take precautionary measures against static discharges.  
Provide sufficient air exchange and/or exhaust in work rooms.  
Dispose of rinse water in accordance with local and national regulations.  
Always replace cap after use.
- Conditions for safe storage : BEWARE: Aerosol is pressurized. Keep away from direct sun exposure and temperatures over 50 °C. Do not open by force or throw into fire even after use. Do not spray on flames or red-hot objects.  
No smoking.  
Keep in a dry, cool and well-ventilated place.  
Observe label precautions.  
Electrical installations / working materials must comply with the technological safety standards.
- Materials to avoid : Keep away from oxidising agents, strongly acid or alkaline materials and amines.

### SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

#### Components with workplace control parameters

Components	CAS-No.	Value type	Control	Basis
------------	---------	------------	---------	-------

## A01363 MST ELECTRONICS CLEANER 16n14

Version 1.0

Revision Date 05/20/2015

Print Date 09/03/2015

		(Form of exposure)	parameters / Permissible concentration	
norflurane	811-97-2	TWA	1,000 ppm	US WEEL
trans-dichloroethylene	156-60-5	TWA	200 ppm 793 mg/m <sup>3</sup>	ACGIH
ethanol	64-17-5	TWA	1,000 ppm	ACGIH
		TWA	1,000 ppm 1,900 mg/m <sup>3</sup>	NIOSH REL
		TWA	1,000 ppm 1,900 mg/m <sup>3</sup>	OSHA Z-1
		TWA	1,000 ppm 1,900 mg/m <sup>3</sup>	OSHA P0

**Biological occupational exposure limits**

Component	CAS-No.	Control parameters	Biological specimen	Sampling time	Permissible concentration	Basis
Methanol	67-56-1	Methanol	Urine	End of shift (As soon as possible after exposure ceases)	15 mg/l	ACGIH BEI

**Personal protective equipment**

- Respiratory protection : Use respiratory protection unless adequate local exhaust ventilation is provided or exposure assessment demonstrates that exposures are within recommended exposure guidelines.
- Hand protection  
Remarks : The suitability for a specific workplace should be discussed with the producers of the protective gloves.
- Eye protection : Ensure that eyewash stations and safety showers are close to the workstation location.  
Tightly fitting safety goggles
- Skin and body protection : impervious clothing  
Choose body protection according to the amount and concentration of the dangerous substance at the work place.
- Hygiene measures : When using do not eat or drink.  
When using do not smoke.  
Wash hands before breaks and at the end of workday.

**SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

- Appearance : Aerosol containing a liquefied gas
- Colour : colourless
- Odour : solvent-like

**A01363 MST ELECTRONICS CLEANER 16n14**

Version 1.0

Revision Date 05/20/2015

Print Date 09/03/2015

---

Odour Threshold	: no data available
pH	: not applicable
Melting point/freezing point	: no data available
Boiling point	: no data available
Flash point	: not applicable
Evaporation rate	: > 1
Upper explosion limit	: no data available
Lower explosion limit	: no data available
Vapour pressure	: no data available
Relative vapour density	: no data available
Density	: no data available
Solubility(ies)	
Water solubility	: negligible
Partition coefficient: n-octanol/water	: no data available
Auto-ignition temperature	: not determined
Thermal decomposition	: no data available
Viscosity	
Viscosity, kinematic	: no data available

---

**SECTION 10. STABILITY AND REACTIVITY**

Reactivity	: Stable
Chemical stability	: Stable under normal conditions.
Possibility of hazardous reactions	: Vapours may form explosive mixture with air. No decomposition if stored and applied as directed.
Conditions to avoid	: Heat, flames and sparks. Extremes of temperature and direct sunlight.
Incompatible materials	: Oxidizing agents
Hazardous decomposition products	: Carbon monoxide, carbon dioxide and unburned hydrocarbons (smoke).

---

**SECTION 11. TOXICOLOGICAL INFORMATION****Acute toxicity**

**A01363 MST ELECTRONICS CLEANER 16n14**

Version 1.0

Revision Date 05/20/2015

Print Date 09/03/2015

**Product:**

Acute oral toxicity : Acute toxicity estimate : 3,499 mg/kg  
Method: Calculation method

Acute inhalation toxicity : Acute toxicity estimate : 13077 ppm  
Exposure time: 4 h  
Test atmosphere: gas  
Method: Calculation method

Acute dermal toxicity : Acute toxicity estimate : > 5,000 mg/kg  
Method: Calculation method

**Components:****norflurane:**

Acute inhalation toxicity : LC50 rat: 12,503.751 mg/l  
Exposure time: 4 h

**trans-dichloroethylene:**

Acute oral toxicity : LD50 Oral rat: 1,235 mg/kg

Acute inhalation toxicity : LC50 rat: 24100 ppm  
Exposure time: 4 h

Acute dermal toxicity : LD50 Dermal rabbit: > 5,000 mg/kg

**ethanol:**

Acute oral toxicity : LD50 Oral rat: 7,060 mg/kg

Acute inhalation toxicity : LC50 rat: 124.7 mg/l  
Exposure time: 4 h

**Skin corrosion/irritation****Product:**

Remarks: May cause skin irritation in susceptible persons.

**Components:****trans-dichloroethylene:**

Species: rabbit  
Exposure time: 24 h  
Result: Skin irritation

**Serious eye damage/eye irritation****Product:**

Remarks: Vapours may cause irritation to the eyes, respiratory system and the skin.

**Components:**

**A01363 MST ELECTRONICS CLEANER 16n14**

Version 1.0

Revision Date 05/20/2015

Print Date 09/03/2015

**trans-dichloroethylene:**

Species: rabbit  
Exposure time: 24 h  
Result: Eye irritation

**Respiratory or skin sensitisation**

no data available

**Germ cell mutagenicity**

no data available

**Carcinogenicity**

no data available

**Reproductive toxicity**

no data available

**norflurane:**  
**trans-dichloroethylene:**  
**ethanol:**  
**methanol:**

**STOT - single exposure**

no data available

**STOT - repeated exposure**

no data available

**Aspiration toxicity**

no data available

**Further information**

**Product:**

Remarks: no data available

**SECTION 12. ECOLOGICAL INFORMATION**

**Ecotoxicity**

no data available

**Persistence and degradability**

no data available

**Bioaccumulative potential**

**Product:**

Partition coefficient: n-octanol/water : Remarks: no data available

**Mobility in soil**

no data available



# SAFETY DATA SHEET



## A01363 MST ELECTRONICS CLEANER 16n14

Version 1.0

Revision Date 05/20/2015

Print Date 09/03/2015

### Other adverse effects

no data available

#### Product:

Regulation 40 CFR Protection of Environment; Part 82 Protection of Stratospheric Ozone - CAA Section 602 Class I Substances

Remarks This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).

Additional ecological information : no data available

---

### SECTION 13. DISPOSAL CONSIDERATIONS

#### Disposal methods

Waste from residues : The product should not be allowed to enter drains, water courses or the soil.  
Do not contaminate ponds, waterways or ditches with chemical or used container.  
Dispose of in accordance with local regulations.

Contaminated packaging : Empty containers should be taken to an approved waste handling site for recycling or disposal.

---

### SECTION 14. TRANSPORT INFORMATION

Transportation Regulation: 49 CFR (USA):  
ORM-D, CONSUMER COMMODITY

Transportation Regulation: IMDG (Vessel):  
UN1950, AEROSOLS, 2.1, - Limited quantity

Transportation Regulation: IATA (Cargo Air):  
UN1950, Aerosols, flammable, 2.1, - Limited quantity

Transportation Regulation: IATA (Passenger Air):  
UN1950, Aerosols, flammable, 2.1, - Limited quantity

Transportation Regulation: TDG (Canada):  
UN1950, AEROSOLS, 2.1, - Limited quantity

### SECTION 15. REGULATORY INFORMATION

**EPCRA - Emergency Planning and Community Right-to-Know Act**

## A01363 MST ELECTRONICS CLEANER 16n14

Version 1.0

Revision Date 05/20/2015

Print Date 09/03/2015

**CERCLA Reportable Quantity**

Components	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
trans-dichloroethylene	156-60-5	1000	3363

**SARA 304 Extremely Hazardous Substances Reportable Quantity**

This material does not contain any components with a section 304 EHS RQ.

**SARA 311/312 Hazards** : Fire Hazard  
Sudden Release of Pressure Hazard  
Acute Health Hazard

**SARA 302** : SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

**SARA 313** : SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

**California Prop 65** WARNING: This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.  
methanol 67-56-1

**The components of this product are reported in the following inventories:**

**TSCA** On TSCA Inventory  
**DSL** This product contains one or several components that are not on the Canadian DSL nor NDSL.  
**AICS** Not in compliance with the inventory  
**NZIoC** Not in compliance with the inventory  
**PICCS** Not in compliance with the inventory  
**IECSC** Not in compliance with the inventory

**Inventory Acronym and Validity Area Legend:**

AICS (Australia), DSL (Canada), IECSC (China), REACH (European Union), ENCS (Japan), ISHL (Japan), KECI (Korea), NZIoC (New Zealand), PICCS (Philippines), TSCA (USA)

**SECTION 16. OTHER INFORMATION**

## A01363 MST ELECTRONICS CLEANER 16n14

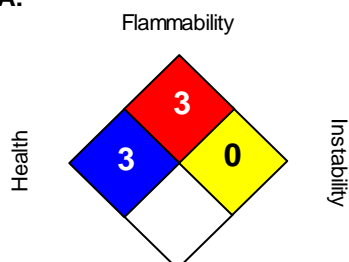
Version 1.0

Revision Date 05/20/2015

Print Date 09/03/2015

## Further information

## NFPA:



## HMIS III:

HEALTH	3
FLAMMABILITY	3
PHYSICAL HAZARD	2

0 = not significant, 1 = Slight,  
2 = Moderate, 3 = High  
4 = Extreme, \* = Chronic

## OSHA GHS Label Information:

Hazard pictograms



Signal word

Hazard statements

Precautionary statements

: **Warning:**  
: Flammable aerosol. Contains gas under pressure; may explode if heated. Causes skin irritation. Causes serious eye irritation. Harmful if inhaled.

: **Prevention:** Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Do not spray on an open flame or other ignition source. Pressurized container: Do not pierce or burn, even after use. Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray. Wash skin thoroughly after handling. Use only outdoors or in a well-ventilated area. Wear eye protection/ face protection. Wear protective gloves.

: **Response:** IF ON SKIN: Wash with plenty of soap and water. IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If skin irritation occurs: Get medical advice/attention. If eye irritation persists: Get medical advice/attention. Take off contaminated clothing and wash before reuse.

: **Storage:** Protect from sunlight. Do not expose to temperatures exceeding 50 °C/ 122 °F.

Version:	1.0
Revision Date:	05/20/2015
Print Date:	09/03/2015

We believe the statements, technical information and recommendations contained herein are reliable, but they are given without warranty or guarantee of any kind. The information in this document applies to this specific material as supplied. It may not be valid for this material if it is used in combination with any other materials. Users should make their own investigations to determine the suitability and applicability of the information for their particular purposes. This SDS has been prepared by the Compliance Services organization supporting this manufacturer, supplier or distributor.

Zep Inc. markets products under well recognized and established brand names such as Zep®, Zep Commercial®, Zep Professional®, Enforcer®, National Chemical™, Selig™, Misty®, Next

# SAFETY DATA SHEET



## A01363 MST ELECTRONICS CLEANER 16n14

Version 1.0

Revision Date 05/20/2015

Print Date 09/03/2015

---

Dimension™, Petro®, i-Chem®, TimeMist®, TimeWick™, MicrobeMax®, Country Vet®, Konk®, Original Bike Spirits®, Blue Coral®, Black Magic®, Rain-X®, Niagara National™, FC Forward Chemicals®, Rexodan®, Mykal™, and a number of private labeled brands.