Safety Data Sheet
ULTRABOND ECO 575

Safety Data Sheet dated 26/11/2012, version 1

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Trade name: ULTRABOND ECO 575

1.2. Relevant identified uses of the substance or mixture and uses advised against

Water-borne synthetic polymer based adhesive

Uses advised against: ==

1.3. Details of the supplier of the safety data sheet

Supplier:

MAPEI S.p.A. -Via Cafiero 22 - Milan -ITALY

Competent person responsible for the safety data sheet:

sicurezza@mapei.it

1.4. Emergency telephone number

MAPEI S.p.A. - Tel. +(39)02376731 - (office hours)

Poison Centre - Ospedale di Niguarda - Milan - Tel. +39/02/66101029

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Directive criteria, 67/548/CE, 99/45/EC and following amendments thereof:

Properties / Symbols:

None.

Adverse physicochemical, human health and environmental effects:

No other hazards

2.2. Label elements

The preparation should not be considered as dangerous accordingly to dir. 1999/45/EC.

Special provisions according to Annex XVII of REACH and subsequent amendments:

None

2.3. Other hazards

vPvB Substances: None - PBT Substances: None

Other Hazards:

No other hazards

SECTION 3: Composition/information on ingredients

3.1. Substances

N.A.

3.2. Mixtures

Hazardous components within the meaning of EEC directive 67/548 and CLP regulation and corresponding classification:

None

SECTION 4: First aid measures

4.1. Description of first aid measures

In case of skin contact:

Wash with plenty of water and soap.

In case of eyes contact:

In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Wash immediately with water for at least 10 minutes.

In case of Ingestion:

A suspension of activated charcoal in water, or petrolium jelly may be administered. Wash the mouth thoroughly and drink plenty of water. In case of disease consult a physician immediately and present this safety-data sheet.

In case of Inhalation:

Remove casualty to fresh air and keep warm and at rest.

4.2. Most important symptoms and effects, both acute and delayed

No specific hazards are encountered under normal product use.

4.3. Indication of any immediate medical attention and special treatment needed

Treatment:

(see paragraph 4.1)

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media:

None in particular.

Extinguishing media which must not be used for safety reasons:

None in particular.

5.2. Special hazards arising from the substance or mixture

The product does not present a fire hazard

Do not inhale explosion and combustion gases.

Burning produces heavy smoke.

The original ingredients or unidentified toxic and/or irritant compounds may be present in the combustion fumes.

5.3. Advice for firefighters

Use suitable breathing apparatus .

Collect contaminated fire extinguishing water separately. This must not be discharged into drains.

Move undamaged containers from immediate hazard area if it can be done safely.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Wear personal protection equipment.

Remove persons to safety.

See protective measures under point 7 and 8.

6.2. Environmental precautions

Limit leakages with earth or sand.

Do not allow to enter into soil/subsoil. Do not allow to enter into surface water or drains.

In case of gas escape or of entry into waterways, soil or drains, inform the responsible authorities.

6.3. Methods and material for containment and cleaning up

Suitable material for taking up: absorbing material, organic, sand

Wash with plenty of water.

Retain contaminated washing water and dispose it.

6.4. Reference to other sections

See also section 8 and 13

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Avoid contact with skin and eyes, inhaltion of vapours and mists.

Do not eat or drink while working.
See also section 8 for recomened protective equipment.

7.2. Conditions for safe storage, including any incompatibilities

Keep away from food, drink and feed.
Incompatible materials:
None in particular.
Instructions as regards storage premises:
Adequately ventilated premises.
Store above 5℃.

7.3. Specific end use(s)

None in particular

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

No occupational exposure limit available

DNEL Exposure Limit Values

N.A.

PNEC Exposure Limit Values

N.A.

8.2. Exposure controls

Eye protection:

Not needed for normal use. Anyway, operate according good working practices.

Protection for skin:

No special precaution must be adopted for normal use.

Protection for hands:

The use of LLPDE (0,06 mm), nitrile (0,4) or butyl (0,5 mm) gloves is suggested.
Latex gloves are not recommended.

Respiratory protection:

Not needed for normal use.
Personal Protective Equipment should comply with relevant CE standards (as EN 374 for gloves and EN 166 for goggles), correctly maintained and stored. Consult the supplier to check the suitability of equipment against specific chemicals and for user information.

Thermal Hazards:

None

Environmental exposure controls:

None

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance:	paste
Colour:	beige
Odour:	typical
Odour threshold:	N.A.
pH:	8.4
Melting point / freezing point:	N.A.
Initial boiling point and boiling range:	100 ℃
Solid/gas flammability:	N.A.
Upper/lower flammability or explosive limits:	N.A.
Vapour density:	N.A.

Flash point:	== ℃
Evaporation rate:	N.A.
Vapour pressure:	N.A.
Relative density:	1.4 g/cm³ (23℃)
Vapour density (air=1):	N.A.
Solubility in water:	dispersible
Solubility in oil:	insoluble
Viscosity:	N.A.
Auto-ignition temperature:	== ℃
Explosion limits(by volume):	==
Decomposition temperature:	N.A.
Partition coefficient (n-octanol/water):	N.A.
Explosive properties:	==
Oxidizing properties:	N.A.

9.2. Other information

Miscibility:	N.A.
Fat Solubility:	N.A.
Conductivity:	N.A.
Substance Groups relevant properties	N.A.

SECTION 10: Stability and reactivity

10.1. Reactivity

Stable under normal conditions

10.2. Chemical stability

Stable under normal conditions

10.3. Possibility of hazardous reactions

None

10.4. Conditions to avoid

Stable under normal conditions.

10.5. Incompatible materials

None in particular.

10.6. Hazardous decomposition products

None.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Route(s) of entry:

Ingestion:	Yes
Inhalation:	No
Contact:	No

Toxicological information related to the product:

There is no toxicological data available on the mixture. Consider the individual concentration of each component to assess toxicological effects resulting from exposure to the mixture.

Toxicological information of the mixture:

N.A.

Toxicological information of the main substances found in the mixture:

N.A.

Corrosive/Irritating Properties:

Eye:

The product can cause a temporary irritation by contact.

Sensitizing Properties:

No effects are known.

Cancerogenic Effects:

No effects are known.

Mutagenic Effects:
No effects are known.
Teratogenic Effects:
No effects are known.
If not differently specified, the information required in Regulation 453/2010/EC listed below must be considered as N.A.:
a) acute toxicity;
b) skin corrosion/irritation;
c) serious eye damage/irritation;
d) respiratory or skin sensitisation;
e) germ cell mutagenicity;
f) carcinogenicity;
g) reproductive toxicity;
h) STOT-single exposure;
i) STOT-repeated exposure;
j) aspiration hazard.

SECTION 12: Ecological information

12.1. Toxicity
Not available data on the mixture
Aquatic toxicity: the preparation is not to be considered toxic to the aquatic environment based on components.
LC50>100mg/l - aquatic species (calculated data following 1999/45/EC Directive).
Adopt good industrial practices, so that the product is not released into the environment.
N.A.

12.2. Persistence and degradability
N.A.

12.3. Bioaccumulative potential
N.A.

12.4. Mobility in soil
N.A.

12.5. Results of PBT and vPvB assessment
vPvB Substances: None - PBT Substances: None

12.6. Other adverse effects
Not available data on the mixture

SECTION 13: Disposal considerations

13.1. Waste treatment methods
Recover if possible. In so doing, comply with the local and national regulations currently in force.
91/156/EEC, 91/689/EEC, 94/62/EC and subsequent amendments.
Disposal of hardened product (EC waste code) : 08 04 10
Disposal of not hardened product (EC waste code) : 08 04 16
The suggested European waste code is just based on the composition of the product.
According to the specific process or application field a different waste code may be necessary.

SECTION 14: Transport information

14.1. UN number
UN Number: ==

14.2. UN proper shipping name
N.A.

14.3. Transport hazard class(es)

Rail/Road(RID/ADR):	no dangerous good
ADR-Upper number:	NA
Air (ICAO/IATA):	no dangerous good

Sea (IMO/IMDG): no dangerous good
N.A.

14.4. Packing group
N.A.

14.5. Environmental hazards
ADR Enverinmental Pollutant:
Marine pollutant: No
N.A.

14.6. Special precautions for user
N.A.

14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code
No

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture
Dir. 67/548/EEC (Classification, packaging and labelling of dangerous substances)
Dir. 99/45/EC (Classification, packaging and labelling of dangerous preparations)
Dir. 98/24/EC (Risks related to chemical agents at work)
Dir. 2000/39/EC (Occupational exposure limit values)
Dir. 2006/8/EC
Regulation (EC) n. 1907/2006 (REACH)
Regulation (EC) n. 1272/2008 (CLP)
Regulation (EC) n. 790/2009 (ATP 1 CLP)
Regulation (EU) n. 453/2010 (Annex I)

Restrictions related to the product or the substances contained according to Annex XVII Regulation (EC) 1907/2006 (REACH) *and subsequent modifications:*
None

REACH Regulation (1907/2006)

REACH Regulatio n°1907/2006 (REACH) – Art. 59 (Su bstances in "Candidate List"): N.A.
CLP Regulation n°1272/2008 (CLP) and s.m.i.
Directive n°1999/45/CE (Dangerous Preparation) an d s.m.i.
Directive n°67/548/CEE (Substances) and s.m.i.

Directive 2000/39/CE and s.m.i. (Professional threshold limit)

Directive 105/2003/CE (Seveso III): N.A.
ADR Agreement – IMDG Code – IATA Regulation
Wassergefährdungsklasse:

VOC (2004/42/EC) : N.A. g/l

15.2. Chemical safety assessment

No

SECTION 16: Other information

This safety data sheet has been completely updated in compliance to Regulation 453/2010/EU.

This document was prepared by a competent person who has received appropriate training.
Main bibliographic sources:

NIOSH - Registry of toxic effects of chemical substances
ECDIN - Environmental Chemicals Data and Information Network - Joint Research Centre, Commission of the European Communities
SAX'S - Dangerous properties of industrial materials
Istituto Superiore di Sanità - Inventario Nazionale Sostanze Chimiche

The information contained herein is based on our state of knowledge at the above-specified date. It refers solely to the product indicated and constitutes no guarantee of particular quality.
This MSDS cancels and replaces any preceding release.

ADR:	European Agreement concerning the International Carriage of Dangerous Goods by Road.
CAS:	Chemical Abstracts Service (division of the American Chemical Society).
CLP:	Classification, Labeling, Packaging.
DNEL:	Derived No Effect Level.
EINECS:	European Inventory of Existing Commercial Chemical Substances.
GefStoffVO:	Ordinance on Hazardous Substances, Germany.
GHS:	Globally Harmonized System of Classification and Labeling of Chemicals.
IATA:	International Air Transport Association.
IATA-DGR:	Dangerous Goods Regulation by the "International Air Transport Association" (IATA).
ICAO:	International Civil Aviation Organization.
ICAO-TI:	Technical Instructions by the "International Civil Aviation Organization" (ICAO).
IMDG:	International Maritime Code for Dangerous Goods.
INCI:	International Nomenclature of Cosmetic Ingredients.
KSt:	Explosion coefficient.
LC50:	Lethal concentration, for 50 percent of test population.
LD50:	Lethal dose, for 50 percent of test population.
LTE:	Long-term exposure.
PNEC:	Predicted No Effect Concentration.
RID:	Regulation Concerning the International Transport of Dangerous Goods by Rail.
STE:	Short-term exposure.
STEL:	Short Term Exposure limit.
STOT:	Specific Target Organ Toxicity.
TLV:	Threshold Limiting Value.
TWA	Threshold Limit Value for the Time Weighted Average 8 hour day. (ACGIH Standard).
OEL:	European threshold limit value
VLE:	Threshold Limiting Value.
WGK:	German Water Hazard Class.
N.A.:	N.A.
N.D.:	

Material Safety Data Sheet

24 Hour Assistance:
1-847-367-7700
Rust-Oleum Corp.
www.rustoleum.com

Section 1 - Chemical Product / Company Information

Product Name:	Varathane Exterior WB Aerosol satin	Revision Date:	09/02/2011
Identification Number:	250281		
Product Use/Class:	Wood Stain/Aerosol		
Supplier:	Rust-Oleum Corporation 11 Hawthorn Parkway Vernon Hills, IL 60061 USA	Manufacturer:	Rust-Oleum Corporation 11 Hawthorn Parkway Vernon Hills, IL 60061 USA
Preparer:	Regulatory Department		

Section 2 - Composition / Information On Ingredients

Chemical Name	CAS Number	Weight % Less Than	ACGIH TLV-TWA	ACGIH TLV-STEL	OSHA PEL-TWA	OSHA PEL CEILING
Dimethyl Ether	115-10-6	30.0	100 ppm	N.E.	N.E.	N.E.
2-Butoxyethanol	111-76-2	10.0	25 ppm	N.E.	N.E.	N.E.
Isopropanol	67-63-0	5.0	200 ppm	400 ppm	400 ppm	N.E.

Section 3 - Hazards Identification

*** Emergency Overview ***: Contents Under Pressure. Harmful if inhaled. May affect the brain or nervous system causing dizziness, headache or nausea. Vapors may cause flash fire or explosion. Harmful if swallowed. Extremely flammable liquid and vapor.

Effects Of Overexposure - Eye Contact: Causes eye irritation.

Effects Of Overexposure - Skin Contact: Prolonged or repeated contact may cause skin irritation. Substance may cause slight skin irritation.

Effects Of Overexposure - Inhalation: High vapor concentrations are irritating to the eyes, nose, throat and lungs. Avoid breathing vapors or mists. High gas, vapor, mist or dust concentrations may be harmful if inhaled. Harmful if inhaled.

Effects Of Overexposure - Ingestion: Aspiration hazard if swallowed; can enter lungs and cause damage. Substance may be harmful if swallowed.

Effects Of Overexposure - Chronic Hazards: May cause central nervous system disorder (e.g., narcosis involving a loss of coordination, weakness, fatigue, mental confusion, and blurred vision) and/or damage. Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage.

Primary Route(s) Of Entry: Skin Contact, Skin Absorption, Inhalation, Ingestion, Eye Contact

Section 4 - First Aid Measures

First Aid - Eye Contact: Immediately flush eyes with plenty of water for at least 15 minutes holding eyelids open. Get medical attention. Do NOT allow rubbing of eyes or keeping eyes closed.

First Aid - Skin Contact: Wash with soap and water. Get medical attention if irritation develops or persists.

First Aid - Inhalation: If you experience difficulty in breathing, leave the area to obtain fresh air. If continued difficulty is experienced, get medical assistance immediately.

First Aid - Ingestion: Aspiration hazard: Do not induce vomiting or give anything by mouth because this material can enter the lungs and cause severe lung damage. Get immediate medical attention.

Section 5 - Fire Fighting Measures

Flash Point: -42 F (SCC)

Extinguishing Media: Film Forming Foam, Carbon Dioxide, Dry Chemical, Dry Sand, Water Fog

Unusual Fire And Explosion Hazards: FLASH POINT IS LESS THAN 20 °. F. - EXTREMELY FLAMMABLE LIQUID AND VAPOR! Perforation of the pressurized container may cause bursting of the can. Isolate from heat, electrical equipment, sparks and open flame. Keep containers tightly closed. Water spray may be ineffective. Closed containers may explode when exposed to extreme heat. Vapors may form explosive mixtures with air. Vapors can travel to a source of ignition and flash back.

Special Firefighting Procedures: Evacuate area and fight fire from a safe distance.

Section 6 - Accidental Release Measures

Steps To Be Taken If Material Is Released Or Spilled: Contain spilled liquid with sand or earth. DO NOT use combustible materials such as sawdust. Remove all sources of ignition, ventilate area and remove with inert absorbent and non-sparking tools. Dispose of according to local, state (provincial) and federal regulations. Do not incinerate closed containers.

Section 7 - Handling And Storage

Handling: Follow all MSDS/label precautions even after container is emptied because it may retain product residues. Use only in a well-ventilated area. Avoid breathing vapor or mist. Wash thoroughly after handling. Wash hands before eating.

Storage: Do not store above 120 ° F. Store large quantities in buildings designed and protected for storage of NFPA Class I flammable liquids. Contents under pressure. Do not expose to heat or store above 120 ° F. Keep containers tightly closed. Isolate from heat, electrical equipment, sparks and open flame.

Section 8 - Exposure Controls / Personal Protection

Engineering Controls: Prevent build-up of vapors by opening all doors and windows to achieve cross-ventilation. Use explosion-proof ventilation equipment. Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits.

Respiratory Protection: A respiratory protection program that meets OSHA 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use. A NIOSH/MSHA

approved air purifying respirator with an organic vapor cartridge or canister may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits.

Protection provided by air purifying respirators is limited. Use a positive pressure air supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known, or in any other circumstances where air purifying respirators may not provide adequate protection.

Skin Protection: Nitrile or Neoprene gloves may afford adequate skin protection. Use impervious gloves to prevent skin contact and absorption of this material through the skin.

Eye Protection: Use safety eyewear designed to protect against splash of liquids.

Other protective equipment: Refer to safety supervisor or industrial hygienist for further information regarding personal protective equipment and its application.

Hygienic Practices: Wash thoroughly with soap and water before eating, drinking or smoking.

Section 9 - Physical And Chemical Properties

Vapor Density:	Heavier than Air	Odor:	Solvent Like
Appearance:	Aerosolized Mist	Evaporation Rate:	Faster than Ether
Solubility in H2O:	Miscible	Freeze Point:	N.D.
Specific Gravity:	0.876	pH:	N.A.
Physical State:	Liquid		

(See section 16 for abbreviation legend)

Section 10 - Stability And Reactivity

Conditions To Avoid: Avoid temperatures above 120 ° F. Avoid all possible sources of ignition.

Incompatibility: Incompatible with strong oxidizing agents, strong acids and strong alkalies.

Hazardous Decomposition: By open flame, carbon monoxide and carbon dioxide. When heated to decomposition, it emits acrid smoke and irritating fumes.

Hazardous Polymerization: Will not occur under normal conditions.

Stability: This product is stable under normal storage conditions.

Section 11 - Toxicological Information

Chemical Name	LD50	LC50
Dimethyl Ether	N.E.	N.E.
2-Butoxyethanol	N.E.	N.E.
Isopropanol	4396 mg/kg (Rat, Oral)	72.6 mg/L (Rat, Inhalation, 4Hr)

Section 12 - Ecological Information

Ecological Information: Product is a mixture of listed components.

Section 13 - Disposal Information

Disposal Information: Dispose of material in accordance to local, state and federal regulations and ordinances. Do not allow to enter storm drains or sewer systems.

Section 14 - Transportation Information

	Domestic (USDOT)	International (IMDG)	Air (IATA)
Proper Shipping Name:	Consumer Commodity	Aerosols	Aerosols
Hazard Class:	ORM-D	2.1	2.1
UN Number:	N.A.	UN1950	UN1950
Packing Group:	N.A.	N.A.	N.A.
Limited Quantity:	No	Yes	Yes

Section 15 - Regulatory Information

CERCLA - SARA Hazard Category

This product has been reviewed according to the EPA "Hazard Categories" promulgated under Sections 311and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories:

FIRE HAZARD, PRESSURIZED GAS HAZARD

SARA Section 313:

Listed below are the substances (if any) contained in this product that are subject to the reporting requirements of Section 313 of Title III of the Superfund Amendment and Reauthorization Act of 1986 and 40 CFR part 372:

Toxic Substances Control Act:

Listed below are the substances (if any) contained in this product that are subject to the reporting requirements of TSCA 12(B) if exported from the United States:

U.S. State Regulations: As follows -

New Jersey Right-to-Know:

The following materials are non-hazardous, but are among the top five components in this product.

Chemical Name	CAS Number
Deionized Water	7732-18-5
Modified Acrylic Resin Emulsion	PROPRIETARY

Pennsylvania Right-to-Know:

The following non-hazardous ingredients are present in the product at greater than 3%.

Chemical Name	CAS Number
Deionized Water	7732-18-5
Modified Acrylic Resin Emulsion	PROPRIETARY

Acrylic Copolymer	PROPRIETARY

International Regulations: As follows -

CANADIAN WHMIS:

This MSDS has been prepared in compliance with Controlled Product Regulations except for the use of the 16 headings.

CANADIAN WHMIS CLASS: AB5 D2A D2B

Section 16 - Other Information

HMIS Ratings:

Health: 2*	Flammability: 4	Physical Hazard: 0	Personal Protection: X

NFPA Ratings:

Health: 2	Flammability: 4	Instability: 0

VOLATILE ORGANIC COMPOUNDS, g/L: 580

REASON FOR REVISION: Regulatory Update

Legend: N.A. - Not Applicable, N.E. - Not Established, N.D. - Not Determined

Rust-Oleum Corporation believes, to the best of its knowledge, information and belief, the information contained herein to be accurate and reliable as of the date of this material safety data sheet. However, because the conditions of handling, use, and storage of these materials are beyond our control, we assume no responsibility or liability for personal injury or property damage incurred by the use of these materials. Rust-Oleum Corporation makes no warranty, expressed or implied, regarding the accuracy or reliability of the data or results obtained from their use. All materials may present unknown hazards and should be used with caution. The information and recommendations in this material safety data sheet are offered for the users' consideration and examination. It is the responsibility of the user to determine the final suitability of this information and to comply with all applicable international, federal, state, and local laws and regulations.

Nu-Calgon Wholesaler, Inc.

MATERIAL SAFETY DATA SHEET

SECTION 1 – CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Company Name	Phone Number		CHEMTREC	
Nu-Calgon Wholesaler, Inc.	(314) 469-7000 / (800) 554-5499		(800) 424-9300	
Street Address	**City**	**State**	**Postal Code**	**Last Update**
2008 Altom Court	St. Louis	MO	63146-4151	1/13/10
Product Name	**Product Number**	**Product Use**		**EPA Registration #**
Aerosol V-Belt Dressing	4086-03	Belt dressing		N/A

SECTION 2 – COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous Ingredients	% By Wt.	CAS Number	TLV	PEL
Heptane	40 - 50	142-82-5	400 ppm	500 ppm
Propane	10 - 15	74-98-6	1000 ppm	1000 ppm
Isobutane	10 - 15	75-28-5	800 ppm	800 ppm
Stoddard solvent	10 - 15	8052-41-3	100 ppm	100 ppm
Polybutene	10 - 15	9003-29-6	N/E	N/E

SECTION 3 – HAZARD IDENTIFICATION

Emergency Overview: DANGER: Extremely flammable. May be harmful or fatal if swallowed. Ensure adequate ventilation. Pressurized container. Protect from sunlight and do not expose to temperatures exceeding 122°F (50°C). Keep away from open flames, hot surfaces and sources of ignition.
KEEP OUT OF REACH OF CHILDREN

Potential Health Effects

Eyes: Mild eye irritation

Skin: May cause skin irritation and/or dermatitis.

Ingestion: Aspiration may cause pulmonary oedema and pneumonitis. May be harmful or fatal if swallowed.

Inhalation: Inhalation of high vapour concentrations may cause nasal & respiratory irritation and symptoms like headache, dizziness, tiredness, nausea, vomiting and possible unconsciousness.

Chronic Exposure: Chronic exposure may cause nausea and vomiting, higher exposure causes unconsciousness.

Carcinogenicity: None known

Medical Conditions Aggravated be Exposure: May aggravate existing eye, skin, or upper respiratory conditions

SECTION 4 – FIRST AID MEASURES

Eyes: Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. If eye irritation persists, consult a specialist

Skin: Wash off with soap and water. If skin irritation persists, call a physician

Ingestion: DO NOT INDUCE VOMITING. Never give anything by mouth to an unconscious person. Clean mouth with water and afterwards drink plenty of water. Call a physician or Poison Control Centre immediately

Inhalation: Move to fresh air. If not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth. Obtain medical attention

SECTION 5 – FIREFIGHTING MEASURES

Flash Point: No Data.°F

Autoignition Temp: No Data.°C/No Data.°F

Hazardous Products of Combustion: Carbon oxides

Flammable Limits in Air: No Data.

Extinguishing Media: Carbon dioxide (CO_2). Foamy spray. Dry chemical.

Fire and Explosion Hazards: Pressurized container. Protect from sunlight and do not expose to temperatures exceeding 122°F (50°C)

Special Firefighting Procedures: Water mist may be used to cool closed containers.

SECTION 6 – ACCIDENTAL RELEASE MEASURES

Spill or Leak: Absorb spill with inert material (e.g. dry sand or earth), then place in a chemical waste container . Dispose of in accordance with local regulations.

SECTION 7 – HANDLING AND STORAGE

Handling Procedures and Equipment: Ensure adequate ventilation, especially in confined areas. Avoid contact with skin and eyes. Do not pierce or burn, even after use. Do not spray on naked flame or any incandescent material.

Storage Requirements: KEEP OUT OF REACH OF CHILDREN. Pressurized container. Protect from sunlight and do not expose to temperatures exceeding 122°F (50°C).

SECTION 8 – EXPOSURE CONTROLS/PERSONAL PROTECTION

Respiratory Protection: When workers are facing concentrations above the exposure limit they must use appropriate certified respirators

Eye Protection: Safety glasses with side-shields

Protective Clothing: Neoprene gloves

Exposure Guidelines: See section 2

Specific Engineering Controls (such as ventilation, enclosed process): Ensure adequate ventilation, especially in confined areas

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

Physical Form: Aerosol	**Freezing Point**: No Data.°C/No Data.°F	**% Volatile by Weight**: 88.8; per US EPA Definition%
Color: Yellow	**Vapor Density [air =1]**: No Data.	**Evaporation Rate**: No Data.
Odor: Solvent	**Vapor Pressure**: PSIG @ 70°F (Aerosols): Max. 50.	**Specific Gravity**: 0.74 (Concentrate only)
Boiling Point: No Data.°C/No Data.°F	**Solubility in Water**: Insoluble.	**pH (concentrate)**: No Data.

SECTION 10 – STABILITY AND REACTIVITY

Chemical Stability: Stable under normal conditions

Hazardous Polymerization: Hazardous polymerization does not occur

Incompatibilities: Strong oxidizing agents, alkalis, Amines, Potassium, Sodium and Magnesium

Reactive Conditions to avoid: Heat, flames and sparks. Extremes of temperature

Decomposition Products: Carbon oxides

SECTION 11 – TOXICOLOGICAL INFORMATION

Hazardous Ingredients	CAS #	EINECS #	LD 50 of Ingredient (Specify Species)	LC50 of Ingredient (Specify Species)
Heptane	142-82-5	No Data.	No Data.	Inhalation LC50 Rat: 103 g/m3/4H
Propane	74-98-6	No Data.	No Data.	No Data.
Isobutane	75-28-5	No Data.	No Data.	Inhalation LC50 Rat: 57 pph/15M
Stoddard solvent	8052-41-3	No Data.	No Data.	No Data.
Polybutene	9003-29-6	No Data.	No Data.	No Data.

SECTION 12 – ECOLOGICAL INFORMATION

Hazardous Ingredients	Aquatic Toxicity Data
Heptane	24 Hr LC50 goldfish: 4.0 mg/L; 24 Hr LC50 mosquito fish: 4900 mg/L; 96 Hr LC50 cichlid fish: 375.0 mg/L
Propane	No Data.
Isobutane	No Data.
Stoddard solvent	No Data.
Polybutene	No Data.

SECTION 13 – DISPOSAL CONSIDERATIONS

Waste Disposal: Should not be released into the environment. Dispose of in accordance with local regulations.

SECTION 14 – TRANSPORTATION INFORMATION

Special Shipping Information: No Data.

Purview	Proper Shipping Name	UN Number	Packing Group	Hazard Class
DOT (Land)	Consumer Commodity ORM-D	No Data.	No Data.	No Data.
IMO (Water)	No Data.	No Data.	No Data.	No Data.
ICAO (Air)	Aerosol, Flammable	UN1950	No Data.	2.1

SECTION 15 – REGULATORY INFORMATION

WHMIS Classification: (Workplace Hazardous Material Information System)	A, B1, B2, D2B
SARA Title III: (Superfund Amendments & Authorization Act)	No
OSHA: (Occupational Safety & Health Administration)	See Section 2
TSCA: (Toxic Substance Control Act)	Present
VOC: (volatile Organic Compounds)	88.8%
CPR: (Canadian Controlled Products Regulations)	This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations.
EINECS: (European Inventory of Existing Commercial Chemical Substances)	No Data.
DSL / NDSL: (Canadian Domestic Substance List)(Non-Domestic Substance List)	Present
CERCLA: (Comprehensive Response Compensation & Liability Act)	No Data.
IDL: (Canadian Ingredient Disclosure List)	No Data.
NFPA (HMIS) Rating: (Hazardous Materials Identification System)	Health=2; Fire=3; Reactivity=0 Personal protective equipment = B

SECTION 16 – OTHER INFORMATION

No Data.

The information contained herein is based on the data available to us and is believed to be correct. However, Nu-Calgon Wholesaler Inc. makes no warranty, expressed, or implied, regarding the accuracy of this data or the results to be obtained from the use thereof. Nu-Calgon Wholesaler Inc. assumes no liability for injury from the use of the product described herin.

SAFETY DATA SHEET
Waxie-Greem #543 Green Glass & Surface Cleaner Concentrate

1. PRODUCT AND COMPANY IDENTIFICATION

oduct Code:	950110	
roduct Name:	Waxie-Greem #543 Green Glass & Surface Cleaner Concentrate	
Company Name:	Waxie Sanitary Supply 9353 Waxie Way San DIego, CA 92123-1036	**Phone Number:** 1 (800)995-4466
Web site address:	www.waxie.com	
Emergency Contact: Information:	Chem-Tel	1 (800)255-3924

2. HAZARDS IDENTIFICATION

Flammable Liquids, Category 2
Flammable Solids, Category 1
Acute Toxicity: Oral, Category 4
Skin Corrosion/Irritation, Category 3
Serious Eye Damage/Eye Irritation, Category 2A
Target Organ Systemic Toxicity (single exposure), Category 3

Danger **Warning**

GHS Hazard Phrases:
H225 - Highly flammable liquid and vapor.
H228 - Flammable solid.
H302 - Harmful if swallowed.
H316 - Causes mild skin irritation.
H319 - Causes serious eye irritation.
H335 - May cause respiratory irritation.

GHS Precaution Phrases:
P233 - Keep container tightly closed.
P210 - Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P280 - Wear protective gloves/protective clothing/eye protection/face protection.
P240 - Ground/bond container and receiving equipment.
P241 - Use explosion-proof electrical/ventilating/lighting/.../ equipment.
P243 - Take precautionary measures against static discharge.
P242 - Use only non-sparking tools.
P264 - Wash hands thoroughly after handling.
P270 - Do not eat, drink or smoke when using this product.
P271 - Use only outdoors or in a well-ventilated area.
P261 - Avoid breathing dust/fume/gas/mist/vapours/spray.

GHS Response Phrases:
P370+378 - In case of fire, use ... to extinguish.
P303+361+353 - IF ON SKIN (or hair): Remove/take off immediately all contaminated clothing. Rinse skin with water/shower.
P301+312 - IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
P330 - Rinse mouth.
P332+313 - If skin irritation occurs, get medical advice/attention.
P305+351+338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337+313 - If eye irritation persists, get medical advice/attention.
P309+311 - Call a POISON CENTER or doctor/physician if exposed or you feel unwell.
P304+340 - IF INHALED: Remove victim to fresh air and keep at rest in a position

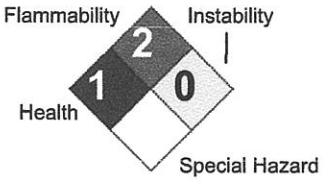
comfortable for breathing.

GHS Storage and Disposal Phrases:

P403+235 - Store in cool/well-ventilated place.
P501 - Dispose of contents/container to ....
P405 - Store locked up.
P403+233 - Store container tightly closed in well-ventilated place - if product is as volatile as to generate hazardous atmosphere.

Hazard Rating System:

HEALTH	1
FLAMMABILITY	2
PHYSICAL	0
PPE	B



Potential Health Effects (Acute and Chronic):

Chronic: May cause reproductive and fetal effects. Laboratory experiments have shown mutagenic effects. Animal studies have reported the development of tumors. Prolonged exposure may cause liver, kidney, and heart damage.

Inhalation:

Inhalation of high concentrations may cause central nervous system effects characterized by nausea, headache, dizziness, unconsciousness and coma. Causes respiratory tract irritation. May cause narcotic effects in high concentration. Vapors may cause dizziness or suffocation. May be harmful if inhaled. Skin: Harmful if absorbed through skin. Causes skin irritation.

Skin Contact:

Causes moderate skin irritation. May cause cyanosis of the extremities.

Eye Contact:

Causes severe eye irritation. May cause painful sensitization to light. May cause chemical conjunctivitis and corneal damage.

Ingestion:

May cause gastrointestinal irritation with nausea, vomiting and diarrhea. May cause systemic toxicity with acidosis. May cause central nervous system depression, characterized by excitement, followed by headache, dizziness, drowsiness, and nausea. Advanced stages may cause collapse, unconsciousness, coma and possible death due to respiratory failure. Harmful if swallowed. Additional Information.
RTECS: QJ6950000

3. COMPOSITION/INFORMATION ON INGREDIENTS

CAS #	Hazardous Components (Chemical Name)	Concentration
64-17-5	Ethyl alcohol	Proprietary
151-21-3	Sodium lauryl sulfate	Proprietary

4. FIRST AID MEASURES

ıergency and First Aid ocedures:

In Case of Inhalation: Remove from exposure and move to fresh air immediately. If breathing is difficult, give oxygen. Get medical aid. Do NOT use mouth-to-mouth resuscitation. If breathed in, move person into fresh air. Consult a physician.

In Case of Skin Contact: Get medical aid. Wash clothing before reuse. Flush skin with plenty of soap and water. Wash off with soap and plenty of water. Consult a physician.

In Case of Eye Contact: Get medical aid. Gently lift eyelids and flush continuously with water. Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

In Case of Ingestion: If victim is conscious and alert, give 2-4 cupfuls of milk or water. Never give anything by mouth to an unconscious person. Get medical aid. Rinse mouth with water. Consult a physician.

Signs and Symptoms Of Exposure: Sneezing. The sodium salt of dodecyl sulfate has been reported to cause pulmonary sensitization resulting in hyperactive airway dysfunction and pulmonary allergy accompanied by fatigue, malaise, and aching.

Note to Physician: Treat symptomatically and supportively. Persons with skin or eye disorders or liver, kidney, chronic respiratory diseases, or central and peripheral nervous sytem diseases may be at increased risk from exposure to this substance.
Antidote: Replace fluid and electrolytes. Consult a physician. Show this safety data sheet to the doctor in attendance.

5. FIRE FIGHTING MEASURES

Flash Pt: > 150 F (65.6 C) Method Used: Pensky-Marten Closed Cup

xplosive Limits: LEL: N.E. UEL: N.E.

utoignition Pt: No data.

Suitable Extinguishing Media: For small fires, use dry chemical, carbon dioxide, water spray or alcohol-resistant foam. For large fires, use water spray, fog, or alcohol-resistant foam. Water may be ineffective. Do NOT use straight streams of water. Use water spray, dry chemical, carbon dioxide, or alcohol-resistant foam.

Fire Fighting Instructions: Replace fluid and electrolytes. As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. Vapors may form explosive mixtures with air. Vapors can travel to a source of ignition and flash back. Will burn if involved in a fire. Flammable Liquid. Can release vapors that form explosive mixtures at temperatures above the flashpoint. Use water spray to keep fire-exposed containers cool. Wear self contained breathing apparatus for fire fighting if necessary.

Further information.
Use water spray to cool unopened containers.

Flammable Properties and Hazards: No data available.

6. ACCIDENTAL RELEASE MEASURES

eps To Be Taken In Case aterial Is Released Or Spilled:

Use proper personal protective equipment as indicated in Section 8.
Spills/Leaks: Absorb spill with inert material (e.g. vermiculite, sand or earth), then place in suitable container. Remove all sources of ignition. Use a spark-proof tool. Provide ventilation. A vapor suppressing foam may be used to reduce vapors. Personal precautions.
Use personal protective equipment. Avoid dust formation. Avoid breathing dust. Evacuate personnel to safe areas.

Environmental precautions.
Prevent further leakage or spillage if safe to do so. Do not let product enter drains.
Methods for cleaning up.
Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations (see section 13). Keep in suitable, closed containers for disposal.

7. HANDLING AND STORAGE

Precautions To Be Taken in Handling:

Wash thoroughly after handling. Use only in a well-ventilated area. Ground and bond containers when transferring material. Use spark-proof tools and explosion proof equipment. Avoid contact with eyes, skin, and clothing. Empty containers retain product residue, (liquid and/or vapor), and can be dangerous. Keep container tightly closed. Keep away from heat, sparks and flame. Avoid ingestion and inhalation. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose empty containers to heat, sparks or open flames. Avoid contact with skin and eyes. Avoid formation of dust and aerosols.

Provide appropriate exhaust ventilation at places where dust is formed. Keep away from sources of ignition - No smoking. Take measures to prevent the build up of electrostatic charge.

Precautions To Be Taken in Storing:

Keep away from heat, sparks and flame. Keep away from sources of ignition. Store in a tightly closed container. Keep from contact with oxidizing materials. Store in a cool, dry, well-ventilated area away from incompatible substances. Flammables-area. Do not store near perchlorates, peroxides, chromic acid or nitric acid. Store in a cool, dry place. Keep container tightly closed in a dry and well-ventilated place.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

CAS #	Partial Chemical Name	OSHA TWA	ACGIH TWA	Other Limits
64-17-5	Ethyl alcohol	PEL: 1000 ppm	TLV: 1000 ppm	No data.
151-21-3	Sodium lauryl sulfate	No data.	No data.	No data.

Respiratory Equipment (Specify Type):

None.

Eye Protection:

Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166. Safety glasses.

otective Gloves:

Wear appropriate protective gloves to prevent skin exposure. The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it. Handle with gloves.

Other Protective Clothing:

None.

Engineering Controls

Use explosion-proof ventilation equipment. Facilities storing or utilizing this material

(Ventilation etc.):	should be equipped with an eyewash facility and a safety shower. Use adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits.
Work/Hygienic/Maintenance Practices:	Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical States:	[ ] Gas [X] Liquid [X] Solid
Appearance and Odor:	Dark blue color liquid with alcohol fragrance.
Melting Point:	No data.
Boiling Point:	> 210 F (100.0 C)
Autoignition Pt:	No data.
Flash Pt:	> 150 F (65.6 C) Method Used: Pensky-Marten Closed Cup
Explosive Limits:	LEL: N.E. UEL: N.E.
Specific Gravity (Water = 1):	0.985
Vapor Pressure (vs. Air or mm Hg):	No data.
Vapor Density (vs. Air = 1):	No data.
Evaporation Rate:	No data.
Solubility in Water:	100%
pH:	6 - 8
Percent Volatile:	No data.
VOC / Volume:	120 G/L

10. STABILITY AND REACTIVITY

Stability:	Unstable [ ] Stable [X]
Conditions To Avoid - Instability:	Incompatible materials, ignition sources, Excess heat, Heat, flames and sparks.
Incompatibility - Materials To Avoid:	Strong oxidizing agents, acids, Alkali metals, Ammonia, hydrazine, Peroxides, Sodium, Acid anhydrides, calcium hypochlorite, chromyl chloride, nitrosyl perchlorate, bromine pentafluoride, Perchloric acid, silver nitrate, mercuric nitrate, potassium tert-butoxide, magnesium perchlorate, Acid chlorides, platinum, uranium hexafluoride, silver oxide, iodine heptafluoride, acetyl bromide, disulfuryl difluoride, tetrachlorosilane + water, acetyl chloride, permanganic acid, ruthenium (VIII) oxide, uranyl perchlorate.
Hazardous Decomposition Or Byproducts:	Carbon monoxide, irritating and toxic fumes and gases, Carbon oxides, Sulphur oxides.
Possibility of Hazardous Reactions:	Will occur [ ] Will not occur [X]
Conditions To Avoid - Hazardous Reactions:	No data available.

11. TOXICOLOGICAL INFORMATION

Toxicological Information: No data available.

Carcinogenicity/Other Information: CAS# 64-17-5: Not listed by ACGIH, IARC, NTP, or CA Prop 65.

CAS #	Hazardous Components (Chemical Name)	NTP	IARC	ACGIH	OSHA
64-17-5	Ethyl alcohol	n.a.	1	A4	n.a.
151-21-3	Sodium lauryl sulfate	n.a.	n.a.	n.a.	n.a.

12. ECOLOGICAL INFORMATION

General Ecological Information:

Environmental: When released to the atmosphere it will photodegrade in hours (polluted urban atmosphere) to an estimated range of 4 to 6 days in less polluted areas. Rainout should be significant.
Physical: No information available.
Elimination information (persistence and degradability)
Bioaccumulation Cyprinus carpio (Carp) - 72 h.

13. DISPOSAL CONSIDERATIONS

Waste Disposal Method:

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Parts 261. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.
RCRA P-Series: None listed.
RCRA U-Series: None listed. Product.
Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Observe all federal, state, and local environmental regulations. Contact a licensed professional waste disposal service to dispose of this material.

Contaminated packaging.
Dispose of as unused product.

14. TRANSPORT INFORMATION

GHS Classification:

Flammable Liquids, Category 2 - Danger! Highly flammable liquid and vapor
Flammable Solids, Category 1 - Danger! Flammable solid
Acute Toxicity: Oral, Category 4 - Warning! Harmful if swallowed
Skin Corrosion/Irritation, Category 3 - Warning! Causes mild skin irritation
Serious Eye Damage/Eye Irritation, Category 2A - Warning! Causes serious eye irritation
Target Organ Systemic Toxicity (single exposure), Category 3 - Warning! May cause respiratory irritation,or may cause drowsiness and dizziness

LAND TRANSPORT (US DOT):

DOT Proper Shipping Name: NOT REGULATED FOR DOMESTIC TRANSPORT.
DOT Hazard Class:
UN/NA Number:

15. REGULATORY INFORMATION

This material meets the EPA Hazard Categories' defined for SARA Title III Sections 311/312 as indicated:	[ ] Yes [X] No	Acute (immediate) Health Hazard
	[ ] Yes [X] No	Chronic (delayed) Health Hazard
	[ ] Yes [X] No	Fire Hazard
	[ ] Yes [X] No	Sudden Release of Pressure Hazard
	[ ] Yes [X] No	Reactive Hazard

CAS #	Hazardous Components (Chemical Name)	Other US EPA or State Lists
64-17-5	Ethyl alcohol	CA PROP.65: No; CA TAC, Title 8: Title 8
151-21-3	Sodium lauryl sulfate	CA PROP.65: No; CA TAC, Title 8: No

16. OTHER INFORMATION

Revision Date: 08/22/2013

Additional Information About This Product: This product contains all biodegradable raw materials.

Company Policy or Disclaimer: Waxie believes the data set forth are accurate, Waxie makes no warranty with respects thereto and disclaims all liability for reliance thereon. Such data are offered solely for consideration, investigation and verification. Also, the data set forth is for the concentrated finished product. All lab samples are for experimental purposes only and used at the customers discretion.

Material Safety Data Sheet

1 - Chemical Product and Company Identification

Manufacturer: WD-40 Company
Address: 1061 Cudahy Place (92110)
P.O. Box 80607
San Diego, California, USA
92138 –0607
Telephone:
Emergency only: 1-888-324-7596 (PROSAR)
Information: 1-888-324-7596
Chemical Spills: 1-800-424-9300 (Chemtrec)
1-703-527-3887 (International Calls)

Chemical Name: Organic Mixture

Trade Name: WD-40 Aerosol

Product Use: Lubricant, Penetrant, Drives Out Moisture, Removes and Protects Surfaces From Corrosion

MSDS Date Of Preparation: 6/8/12

2 – Hazards Identification

Emergency Overview:
DANGER! Flammable aerosol. Contents under pressure. Harmful or fatal if swallowed. If swallowed, may be aspirated and cause lung damage. May cause eye irritation. Avoid eye contact. Use with adequate ventilation. Keep away from heat, sparks and all other sources of ignition.

Symptoms of Overexposure:
Inhalation: High concentrations may cause nasal and respiratory irritation and central nervous system effects such as headache, dizziness and nausea. Intentional abuse may be harmful or fatal.
Skin Contact: Prolonged and/or repeated contact may produce mild irritation and defatting with possible dermatitis.
Eye Contact: Contact may be irritating to eyes. May cause redness and tearing.
Ingestion: This product has low oral toxicity. Swallowing may cause gastrointestinal irritation, nausea, vomiting and diarrhea. This product is an aspiration hazard. If swallowed, can enter the lungs and may cause chemical pneumonitis, severe lung damage and death.
Chronic Effects: None expected.
Medical Conditions Aggravated by Exposure: Preexisting eye, skin and respiratory conditions may be aggravated by exposure.

Suspected Cancer Agent:
Yes No X

3 - Composition/Information on Ingredients

Ingredient	CAS #	Weight Percent
Aliphatic Hydrocarbon	64742-47-8	45-50
Petroleum Base Oil	64742-58-1 64742-53-6 64742-56-9 64742-65-0	<25
LVP Aliphatic Hydrocarbon	64742-47-8	12-18
Carbon Dioxide	124-38-9	2-3
Non-Hazardous Ingredients	Mixture	<10

4 – First Aid Measures

Ingestion (Swallowed): Aspiration Hazard. DO NOT induce vomiting. Call physician, poison control center or the WD-40 Safety Hotline at 1-888-324-7596 immediately.
Eye Contact: Flush thoroughly with water. Remove contact lenses if present after the first 5 minutes and continue flushing for several more minutes. Get medical attention if irritation persists.
Skin Contact: Wash with soap and water. If irritation develops and persists, get medical attention.

Inhalation (Breathing): If irritation is experienced, move to fresh air. Get medical attention if irritation or other symptoms develop and persist.

5 – Fire Fighting Measures

Extinguishing Media: Use water fog, dry chemical, carbon dioxide or foam. Do not use water jet or flooding amounts of water. Burning product will float on the surface and spread fire.
Special Fire Fighting Procedures: Firefighters should always wear positive pressure self-contained breathing apparatus and full protective clothing. Cool fire-exposed containers with water. Use shielding to protect against bursting containers.
Unusual Fire and Explosion Hazards: Contents under pressure. Keep away from ignition sources and open flames. Exposure of containers to extreme heat and flames can cause them to rupture often with violent force. Vapors are heavier than air and may travel along surfaces to remote ignition sources and flash back.

6 – Accidental Release Measures

Wear appropriate protective clothing (see Section 8). Eliminate all sources of ignition and ventilate area. Leaking cans should be placed in a plastic bag or open pail until the pressure has dissipated. Contain and collect liquid with an inert absorbent and place in a container for disposal. Clean spill area thoroughly. Report spills to authorities as required.

7 – Handling and Storage

Handling: Avoid contact with eyes. Avoid prolonged contact with skin. Avoid breathing vapors or aerosols. Use only with adequate ventilation. Keep away from heat, sparks, pilot lights, hot surfaces and open flames. Unplug electrical tools, motors and appliances before spraying or bringing the can near any source of electricity. Electricity can burn a hole in the can and cause contents to burst into flames. To avoid serious burn injury, do not let the can touch battery terminals, electrical connections on motors or appliances or any other source of electricity. Wash thoroughly with soap and water after handling. Keep containers closed when not in use. Keep out of the reach of children. Do not puncture, crush or incinerate containers, even when empty.
Storage: Store in a cool, well-ventilated area, away from incompatible materials. Do not store above 120°F or in direct sunlight. U.F.C (NFPA 30B) Level 3 Aerosol.

8 – Exposure Controls/Personal Protection

Chemical	Occupational Exposure Limits
Aliphatic Hydrocarbon	1200 mg/m3 TWA (manufacturer recommended)
Petroleum Base Oil	5 mg/m3 TWA, 10 mg/m3 STEL ACGIH TLV 5 mg/m3 TWA OSHA PEL
LVP Aliphatic Hydrocarbon	1200 mg/m3 TWA (manufacturer recommended)
Carbon Dioxide	5000 ppm TWA (OSHA/ACGIH), 30,000 ppm STEL (ACGIH)
Non-Hazardous Ingredients	None Established

The Following Controls are Recommended for Normal Consumer Use of this Product
Engineering Controls: Use in a well-ventilated area.
Personal Protection:
Eye Protection: Avoid eye contact. Always spray away from your face.
Skin Protection: Avoid prolonged skin contact. Chemical resistant gloves recommended for operations where skin contact is likely.
Respiratory Protection: None needed for normal use with adequate ventilation.

For Bulk Processing or Workplace Use the Following Controls are Recommended
Engineering Controls: Use adequate general and local exhaust ventilation to maintain exposure levels below that occupational exposure limits.
Personal Protection:
Eye Protection: Safety goggles recommended where eye contact is possible.

Skin Protection: Wear chemical resistant gloves.
Respiratory Protection: None required if ventilation is adequate. If the occupational exposure limits are exceeded, wear a NIOSH approved respirator. Respirator selection and use should be based on contaminant type, form and concentration. Follow OSHA 1910.134, ANSI Z88.2 and good Industrial Hygiene practice.
Work/Hygiene Practices: Wash with soap and water after handling.

9 – Physical and Chemical Properties

Boiling Point:	361 - 369°F (183 - 187°C)	Specific Gravity:	0.8 – 0.82 @ 60°F
Solubility in Water:	Insoluble	pH:	Not Applicable
Vapor Pressure:	95-115 PSI @ 70°F	Vapor Density:	Greater than 1
Percent Volatile:	70-75%	VOC:	412 grams/liter (49.5%)
Coefficient of Water/Oil Distribution:	Not Determined	Appearance/Odor	Light amber liquid/mild odor
Flash Point:	122°F (49°C) Tag Open Cup (concentrate)	Flammable Limits: (Solvent Portion)	LEL: 0.6% UEL: 8.0%
Pour Point:	-63°C (-81.4°F) ASTM D-97	Kinematic Viscosity:	2.79-2.96cSt @ 100°F

10 – Stability and Reactivity

Stability: Stable
Hazardous Polymerization: Will not occur.
Conditions to Avoid: Avoid heat, sparks, flames and other sources of ignition. Do not puncture or incinerate containers.
Incompatibilities: Strong oxidizing agents.
Hazardous Decomposition Products: Carbon monoxide and carbon dioxide.

11 – Toxicological Information

The oral toxicity of this product is estimated to be greater than 5,000 mg/kg based on an assessment of the ingredients. This product is not classified as toxic by established criteria. It is an aspiration hazard.
None of the components of this product is listed as a carcinogen or suspected carcinogen or is considered a reproductive hazard.

12 – Ecological Information

No data is currently available.

13 - Disposal Considerations

If this product becomes a waste, it would be expected to meet the criteria of a RCRA ignitable hazardous waste (D001). However, it is the responsibility of the generator to determine at the time of disposal the proper classification and method of disposal. Dispose in accordance with federal, state, and local regulations.

14 – Transportation Information

DOT Surface Shipping Description: Consumer Commodity, ORM-D
After 1/1/2014 UN1950, Aerosols, 2.1 Ltd. Qty (Note: Shipping Papers are not required for Limited Quantities unless transported by air or vessel – each package must be marked with the Limited Quantity Mark)
IMDG Shipping Description: UN1950, Aerosols, 2.1, LTD QTY
ICAO Shipping Description: UN1950, Aerosols, flammable, 2.1 NOTE: WD-40 does not test aerosol cans to assure that they meet the pressure and other requirements for transport by air. We do not recommend that our aerosol products be transported by air.

15 – Regulatory Information

U.S. Federal Regulations:
CERCLA 103 Reportable Quantity: This product is not subject to CERCLA reporting requirements, however, oil spills are reportable to the National Response Center under the Clean Water Act and many states have more stringent release reporting requirements. Report spills required under federal, state and local regulations.
SARA TITLE III:
Hazard Category For Section 311/312: Acute Health, Fire Hazard, Sudden Release of Pressure
Section 313 Toxic Chemicals: This product contains the following chemicals subject to SARA Title III Section 313 Reporting requirements: None
Section 302 Extremely Hazardous Substances (TPQ): None
EPA Toxic Substances Control Act (TSCA) Status: All of the components of this product are listed on the TSCA inventory.
California Safe Drinking Water and Toxic Enforcement Act (Proposition 65): This product does not contain chemicals regulated under California Proposition 65.
VOC Regulations: This product complies with the consumer product VOC limits of CARB, the US EPA and states adopting the OTC VOC rules.
Canadian Environmental Protection Act: One of the components is listed on the NDSL. All of the other ingredients are listed on the Canadian Domestic Substances List or exempt from notification.
Canadian WHMIS Classification: Class B-5 (Flammable Aerosol)
This MSDS has been prepared according to the criteria of the Controlled Products Regulation (CPR) and the MSDS contains all of the information required by the CPR.

16 – Other Information:

HMIS Hazard Rating:
Health – 1 (slight hazard), Fire Hazard – 4 (severe hazard), Reactivity – 0 (minimal hazard)

(b)(6) illegible signature

SIGNATURE: [redacted] TITLE: Adm. Scientific Manager

REVISION DATE: June 2012 SUPERSEDES: March 2010

Material Safety Data Sheet

according to ANSI Z400.1- 2004 and 29 CFR 1910.1200

SC Johnson
A FAMILY COMPANY

WINDEX® ORIGINAL GLASS CLEANER

Version 1.1 | Print Date 12/05/2012

Revision Date 12/05/2012 | MSDS Number 350000014153

1. PRODUCT AND COMPANY IDENTIFICATION

Product information

Trade name	:	WINDEX® ORIGINAL GLASS CLEANER
Use of the Substance/Mixture	:	Hard Surface Cleaner
Company	:	S.C. Johnson and Son, Limited 1 Webster Street Brantford ON N3T 5R1
Emergency telephone number	:	24 Hour Transport & Medical Emergency Phone (866) 231-5406 24 Hour International Emergency Phone (952) 852-4647 24 Hour Canadian Transport Emergency Phone (CANUTEC) (613) 996-6666

2. HAZARDS IDENTIFICATION

Emergency Overview

Appearance / Odor	:	blue / liquid / pleasant
Immediate Concerns	:	Avoid contact with skin, eyes and clothing.

Potential Health Effects

Exposure routes	:	Eye, Skin, Inhalation, Ingestion.
Eyes	:	May cause: Mild eye irritation
Skin	:	Prolonged or repeated contact may dry skin and cause irritation.
Inhalation	:	No adverse effects expected when used as directed.
Ingestion	:	May cause irritation to mouth, throat and stomach. May cause abdominal discomfort.
Aggravated Medical Condition	:	Persons with pre-existing skin disorders may be more susceptible to irritating effects.

3. COMPOSITION/INFORMATION ON INGREDIENTS

This product does not contain hazardous chemicals at or above a reportable level as defined by OSHA 29 CFR 1910.1200 or Canadian Controlled Products Regulations.

For additional information on product ingredients, see www.whatsinsidescjohnson.com.

4. FIRST AID MEASURES

Eye contact	:	Rinse with plenty of water. Get medical attention if irritation develops and persists.
Skin contact	:	Rinse with plenty of water. Get medical attention if irritation develops and persists.
Inhalation	:	No special requirements
Ingestion	:	Rinse mouth with water.

5. FIREFIGHTING MEASURES

Suitable extinguishing media	:	Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
Specific hazards during firefighting	:	Container may melt and leak in heat of fire.
Further information	:	Although this product has a flash point below 200 Deg F, it is an aqueous solution containing an alcohol and does not sustain combustion. Fight fire with normal precautions from a *reasonable distance. Standard procedure for chemical fires.* Wear full protective clothing and positive pressure self-contained breathing apparatus. In case of fire and/or explosion do not breathe fumes.
Flash point	:	85 °C 185 °F Method: ASTM D 56
Lower explosion limit	:	Note: no data available
Upper explosion limit	:	Note: no data available

6. ACCIDENTAL RELEASE MEASURES

Personal precautions	:	No special precautions required.
Environmental precautions	:	Outside of normal use, avoid release to the environment.
Methods for cleaning up	:	Soak up with inert absorbent material. Sweep up and shovel into suitable containers for disposal. Dike large spills.

Clean residue from spill site.

7. HANDLING AND STORAGE

Handling

Advice on safe handling	:	Use only as directed. KEEP OUT OF REACH OF CHILDREN AND PETS.
Advice on protection against fire and explosion	:	Normal measures for preventive fire protection.

Storage

Requirements for storage areas and containers	:	Keep container closed when not in use. Keep in a dry, cool and well-ventilated place.
Other data	:	Stable under normal conditions.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational Exposure Limits

ACGIH or OSHA exposure limits have not been established for this product or reportable ingredients unless noted in the table above.

Personal protective equipment

Respiratory protection		No personal respiratory protective equipment normally required.
Hand protection	:	No special requirements.
Eye protection		No special requirements.
Skin and body protection	:	No special requirements.
Hygiene measures	:	Handle in accordance with good industrial hygiene and safety practice. Wash thoroughly after handling.

9. PHYSICAL AND CHEMICAL PROPERTIES

Form	:	liquid
Color	:	blue
Odor	:	pleasant

pH	:	10.7
Boiling point	:	no data available
Freezing point	:	no data available
Flash point	:	85 °C 185 °F Method: ASTM D 56
Evaporation rate	:	no data available
Flammability (solid, gas)	:	Does not sustain combustion.
Auto-ignition temperature	:	no data available
Lower explosion limit	:	no data available
Upper explosion limit	:	no data available
Vapour pressure	:	no data available
Density	:	0.997 g/cm3 at 20 °C
Water solubility	:	soluble
Viscosity, dynamic	:	no data available
Viscosity, kinematic	:	no data available
Volatile Organic Compounds Total VOC (wt. %)*	:	0.5 % - additional exemptions may apply *as defined by US Federal and State Consumer Product Regulations

10. STABILITY AND REACTIVITY

Conditions to avoid	:	Direct sources of heat.
Materials to avoid	:	Strong oxidizing agents
Hazardous decomposition products	:	Thermal decomposition can lead to release of irritating gases and vapours.
Hazardous reactions	:	Stable under recommended storage conditions.

11. TOXICOLOGICAL INFORMATION

Acute oral toxicity	:	LD50

		estimated > 5,000 mg/kg
Acute inhalation toxicity	:	LC50 estimated > 2.58 mg/l
Acute dermal toxicity	:	LD50 estimated > 5,000 mg/kg
Chronic effects		
Carcinogenicity	:	*no data available*
Mutagenicity	:	no data available
Reproductive effects	:	no data available
Teratogenicity	:	no data available
Sensitisation	:	Not known to be a sensitizer.

12. ECOLOGICAL INFORMATION

Ecotoxicity effects : no data available

13. DISPOSAL CONSIDERATIONS

Observe all applicable Federal, Provincial and State regulations and Local/Municipal ordinances regarding disposal.
Consumer may discard empty container in trash, or recycle where facilities exist.

14. TRANSPORT INFORMATION

Land transport

- **U.S. DOT and Canadian TDG Surface Transportation:**

Proper shipping name	not regulated
Class:	None.
UN/ID No.:	None.
Packaging group	None.

Sea transport

- *IMDG:*

Proper shipping name	*not regulated*
Class:	None.
UN/ID No.:	None.
Packaging group	None.

Air transport

- *ICAO/IATA:*

Proper shipping name	not regulated
Class:	None.
UN/ID No.:	None.
Packaging group	None.

15. REGULATORY INFORMATION

Notification status	:	All ingredients of this product are listed or are excluded from listing on the U.S. Toxic Substances Control Act (TSCA) Chemical Substance Inventory.
Notification status	:	All ingredients of this product comply with the New Substances Notification requirements under the Canadian Environmental Protection Act (CEPA).
California Prop. 65	:	This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.
Canada Regulations	:	This product has been classified in accordance with hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

16. OTHER INFORMATION

HMIS Ratings

Health	1
Flammability	2
Reactivity	0

NFPA Ratings

Health	1
Fire	2
Reactivity	0
Special	-

Further information
This document has been prepared using data from sources considered to be technically reliable. It does not constitute a warranty, expressed or implied, as to the accuracy of the information contained herein. Actual conditions of use are beyond the seller's control. User is responsible to evaluate all available information when using product for any particular use and to comply with all Federal, State, Provincial and Local laws and regulations.

Prepared by:	SC Johnson Global Safety Assessment & Regulatory Affairs (GSARA)

MATERIAL SAFETY DATA SHEET

S00740/S00840
10 00

DATE OF PREPARATION
Dec 1, 2012

SECTION 1 — PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NUMBER
S00740/S00840
PRODUCT NAME
WL™740 Zinc-Rich Galvanizing Compound Aerosol
MANUFACTURER'S NAME
Sprayon Products
Cleveland, OH 44115

Telephone Numbers and Websites

Product Information	(800) 777-2966 www.sprayon.com
Regulatory Information	(216) 566-2902
Medical Emergency	(216) 566-2917
Transportation Emergency*	(800) 424-9300
**for Chemical Emergency ONLY (spill, leak, fire, exposure, or accident)*	

SECTION 2 — COMPOSITION/INFORMATION ON INGREDIENTS

% by Weight	CAS Number	Ingredient		Units	Vapor Pressure
13	74-98-6	**Propane**			
			ACGIH TLV	2500 PPM	760 mm
			OSHA PEL	1000 PPM	
12	106-97-8	**Butane**			
			ACGIH TLV	800 PPM	760 mm
			OSHA PEL	800 PPM	
3	142-82-5	**Heptane**			
			ACGIH TLV	400 PPM	50 mm
			ACGIH TLV	500 PPM STEL	
			OSHA PEL	400 PPM	
			OSHA PEL	500 PPM STEL	
3	64742-89-8	**V. M. & P. Naphtha**			
			ACGIH TLV	300 PPM	12 mm
			OSHA PEL	300 PPM	
			OSHA PEL	400 PPM STEL	
5	108-88-3	**Toluene**			
			ACGIH TLV	20 PPM	22 mm
			OSHA PEL	100 ppm (Skin)	
			OSHA PEL	150 ppm (Skin) STEL	
11	78-93-3	**Methyl Ethyl Ketone**			
			ACGIH TLV	200 PPM	70 mm
			ACGIH TLV	300 PPM STEL	
			OSHA PEL	200 PPM	
			OSHA PEL	300 PPM STEL	
47	7440-66-6	**Zinc**			
			ACGIH TLV	Not Available	
			OSHA PEL	Not Available	

SECTION 3 — HAZARDS IDENTIFICATION

ROUTES OF EXPOSURE
INHALATION of vapor or spray mist.
EYE or SKIN contact with the product, vapor or spray mist.
EFFECTS OF OVEREXPOSURE
EYES: Irritation.
SKIN: Prolonged or repeated exposure may cause irritation.
INHALATION: Irritation of the upper respiratory system.

HMIS Codes

Health	2
Flammability	2
Reactivity	1

May cause nervous system depression. Extreme overexposure may result in unconsciousness and possibly death.
Prolonged overexposure to hazardous ingredients in Section 2 may cause adverse chronic effects to the following organs or systems:

- the liver
- the urinary system
- the cardiovascular system
- the reproductive system

SIGNS AND SYMPTOMS OF OVEREXPOSURE

Headache, dizziness, nausea, and loss of coordination are indications of excessive exposure to vapors or spray mists.
Redness and itching or burning sensation may indicate eye or excessive skin exposure.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE

None generally recognized.

CANCER INFORMATION

For complete discussion of toxicology data refer to Section 11.

SECTION 4 — FIRST AID MEASURES

EYES: Flush eyes with large amounts of water for 15 minutes. Get medical attention.
SKIN: Wash affected area thoroughly with soap and water.
Remove contaminated clothing and launder before re-use.
INHALATION: If affected, remove from exposure. Restore breathing. Keep warm and quiet.
INGESTION: Do not induce vomiting. Get medical attention immediately.

SECTION 5 — FIRE FIGHTING MEASURES

FLASH POINT	LEL	UEL	EXTINGUISHING MEDIA
Propellant < 0 °F	0.9	10.0	Carbon Dioxide, Dry Chemical, Foam

UNUSUAL FIRE AND EXPLOSION HAZARDS

Containers may explode when exposed to extreme heat.
Application to hot surfaces requires special precautions.
During emergency conditions overexposure to decomposition products may cause a health hazard. Symptoms may not be immediately apparent. Obtain medical attention.

SPECIAL FIRE FIGHTING PROCEDURES

Full protective equipment including self-contained breathing apparatus should be used.
Water spray may be ineffective. If water is used, fog nozzles are preferable. Water may be used to cool closed containers to prevent pressure build-up and possible autoignition or explosion when exposed to extreme heat.

SECTION 6 — ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED

Remove all sources of ignition. Ventilate the area.
Remove with inert absorbent.

SECTION 7 — HANDLING AND STORAGE

STORAGE CATEGORY

Not Available

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE

Keep away from heat, sparks, and open flame. Vapors will accumulate readily and may ignite explosively.
During use and until all vapors are gone: Keep area ventilated - Do not smoke - Extinguish all flames, pilot lights, and heaters - Turn off stoves, electric tools and appliances, and any other sources of ignition.
Consult NFPA Code. Use approved Bonding and Grounding procedures.
Contents under pressure. Do not puncture, incinerate, or expose to temperature above 120F. Heat from sunlight, radiators, stoves, hot water, and other heat sources could cause container to burst. Do not take internally. Keep out of the reach of children.

SECTION 8 — EXPOSURE CONTROLS/PERSONAL PROTECTION

PRECAUTIONS TO BE TAKEN IN USE

Use only with adequate ventilation.
Avoid contact with skin and eyes. Avoid breathing vapor and spray mist.
Wash hands after using.
This coating may contain materials classified as nuisance particulates (listed "as Dust" in Section 2) which may be present at hazardous levels only during sanding or abrading of the dried film. If no specific dusts are listed in Section 2, the applicable limits for nuisance dusts are ACGIH TLV 10 mg/m3 (total dust), 3 mg/m3 (respirable fraction), OSHA PEL 15 mg/m3 (total dust), 5 mg/m3 (respirable fraction).

VENTILATION

Local exhaust preferable. General exhaust acceptable if the exposure to materials in Section 2 is maintained below applicable exposure limits. Refer to OSHA Standards 1910.94, 1910.107, 1910.108.

RESPIRATORY PROTECTION

If personal exposure cannot be controlled below applicable limits by ventilation, wear a properly fitted organic vapor/particulate respirator approved by NIOSH/MSHA for protection against materials in Section 2.

When sanding or abrading the dried film, wear a dust/mist respirator approved by NIOSH/MSHA for dust which may be generated from this product, underlying paint, or the abrasive.

PROTECTIVE GLOVES

None required for normal application of aerosol products where minimal skin contact is expected. For long or repeated contact, wear chemical resistant gloves.

EYE PROTECTION

Wear safety spectacles with unperforated sideshields.

OTHER PRECAUTIONS

Intentional misuse by deliberately concentrating and inhaling the contents can be harmful or fatal.

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

PRODUCT WEIGHT	9.55 lb/gal	1144 g/l
SPECIFIC GRAVITY	1.15	
BOILING POINT	<0 - 325 °F	<-18 - 162 °C
MELTING POINT	Not Available	
VOLATILE VOLUME	88%	
EVAPORATION RATE	Faster than ether	
VAPOR DENSITY	Heavier than air	
SOLUBILITY IN WATER	Not Available	
pH	7.0	

VOLATILE ORGANIC COMPOUNDS (VOC Theoretical - As Packaged)

Volatile Weight 49.22% Less Water and Federally Exempt Solvents

SECTION 10 — STABILITY AND REACTIVITY

STABILITY — Stable

CONDITIONS TO AVOID

None known.

INCOMPATIBILITY

None known.

HAZARDOUS DECOMPOSITION PRODUCTS

By fire: Carbon Dioxide, Carbon Monoxide

HAZARDOUS POLYMERIZATION

Will not occur

SECTION 11 — TOXICOLOGICAL INFORMATION

CHRONIC HEALTH HAZARDS

No ingredient in this product is an IARC, NTP or OSHA listed carcinogen.

Methyl Ethyl Ketone may increase the nervous system effects of other solvents.

Reports have associated repeated and prolonged overexposure to solvents with permanent brain and nervous system damage.

TOXICOLOGY DATA

CAS No.	Ingredient Name			
74-98-6	Propane			
		LC50 RAT	4HR	Not Available
		LD50 RAT		Not Available
106-97-8	Butane			
		LC50 RAT	4HR	Not Available
		LD50 RAT		Not Available
142-82-5	Heptane			
		LC50 RAT	4HR	Not Available
		LD50 RAT		Not Available
64742-89-8	V. M. & P. Naphtha			
		LC50 RAT	4HR	Not Available
		LD50 RAT		Not Available
108-88-3	Toluene			
		LC50 RAT	4HR	4000 ppm
		LD50 RAT		5000 mg/kg
78-93-3	Methyl Ethyl Ketone			
		LC50 RAT	4HR	Not Available
		LD50 RAT		2740 mg/kg
7440-66-6	Zinc			
		LC50 RAT	4HR	Not Available
		LD50 RAT		Not Available

SECTION 12 — ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL INFORMATION

No data available.

SECTION 13 — DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD

Waste from this product may be hazardous as defined under the Resource Conservation and Recovery Act (RCRA) 40 CFR 261.
Waste must be tested for ignitability to determine the applicable EPA hazardous waste numbers.
Do not incinerate. Depressurize container. Dispose of in accordance with Federal, State/Provincial, and Local regulations regarding pollution.

SECTION 14 — TRANSPORT INFORMATION

Multi-modal shipping descriptions are provided for informational purposes and do not consider container sizes. The presence of a shipping description for a particular mode of transport (ocean, air, etc.), does not indicate that the product is packaged suitably for that mode of transport. All packaging must be reviewed for suitability prior to shipment, and compliance with the applicable regulations is the sole responsibility of the person offering the product for transport.

US Ground (DOT)

May be classed as LTD. QTY. OR ORM-D
UN1950, AEROSOLS, 2.1, LIMITED QUANTITY, (ERG#126)

Canada (TDG)

May be classed as LTD. QTY. OR ORM-D
UN1950, AEROSOLS, CLASS 2.1, LIMITED QUANTITY, (ERG#126)

IMO

May be shipped as Limited Quantity
UN1950, AEROSOLS, CLASS 2.1, LIMITED QUANTITY, EmS F-D, S-U, ADR (D)

IATA/ICAO

UN1950, AEROSOLS, FLAMMABLE, 2.1, LIMITED QUANTITY

SECTION 15 — REGULATORY INFORMATION

SARA 313 *(40 CFR 372.65C)* SUPPLIER NOTIFICATION

CAS No.	CHEMICAL/COMPOUND	% by WT	% Element
108-88-3	Toluene	5	
	Zinc Compound	2	46.9

CALIFORNIA PROPOSITION 65

WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

TSCA CERTIFICATION

All chemicals in this product are listed, or are exempt from listing, on the TSCA Inventory.

SECTION 16 — OTHER INFORMATION

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

The above information pertains to this product as currently formulated, and is based on the information available at this time. Addition of reducers or other additives to this product may substantially alter the composition and hazards of the product. Since conditions of use are outside our control, we make no warranties, express or implied, and assume no liability in connection with any use of this information.

EXXONMOBIL

PRODUCT NAME: MOBIL RARUS 427

REVISION DATE: 19 AUG 2011

MATERIAL SAFETY DATA SHEET

SECTION 1 PRODUCT AND COMPANY IDENTIFICATION

PRODUCT:

PRODUCT NAME: MOBIL RARUS 427

PRODUCT DESCRIPTION: BASE OIL AND ADDITIVES

PRODUCT CODE: 606202-00, 970996

INTENDED USE: COMPRESSOR OIL

COMPANY IDENTIFICATION:

SUPPLIER:
EXXON MOBIL CORPORATION
3225 GALLOWS RD.
FAIRFAX, VA. 22037
USA

24 HOUR HEALTH EMERGENCY: 609-737-4411

TRANSPORTATION EMERGENCY PHONE: 800-424-9300

EXXONMOBIL TRANSPORTATION NO.: 281-834-3296

PRODUCT TECHNICAL INFORMATION:
800-662-4525
800-947-9147

MSDS INTERNET ADDRESS:
HTTP://WWW.EXXON.COM
HTTP://WWW.MOBIL.COM

SECTION 2 COMPOSITION / INFORMATION ON INGREDIENTS

NO REPORTABLE HAZARDOUS SUBSTANCE(S) OR COMPLEX SUBSTANCE(S).:

SECTION 3 HAZARDS IDENTIFICATION

THIS MATERIAL IS NOT CONSIDERED TO BE HAZARDOUS ACCORDING TO REGULATORY

GUIDELINES (SEE (M)SDS SECTION 15).

POTENTIAL HEALTH EFFECTS:
LOW ORDER OF TOXICITY. EXCESSIVE EXPOSURE MAY RESULT IN EYE, SKIN, OR RESPIRATORY IRRITATION. HIGH-PRESSURE INJECTION UNDER SKIN MAY CAUSE SERIOUS DAMAGE.

NFPA HAZARD ID:
HEALTH 0
FLAMMABILITY 1
REACTIVITY 0

HMIS HAZARD ID:
HEALTH 0
FLAMMABILITY 1
REACTIVITY 0

NOTE:
THIS MATERIAL SHOULD NOT BE USED FOR ANY OTHER PURPOSE THAN THE INTENDED USE IN SECTION 1 WITHOUT EXPERT ADVICE. HEALTH STUDIES HAVE SHOWN THAT CHEMICAL EXPOSURE MAY CAUSE POTENTIAL HUMAN HEALTH RISKS WHICH MAY VARY FROM PERSON TO PERSON.

SECTION 4 FIRST AID MEASURES

INHALATION:
REMOVE FROM FURTHER EXPOSURE. FOR THOSE PROVIDING ASSISTANCE, AVOID EXPOSURE TO YOURSELF OR OTHERS. USE ADEQUATE RESPIRATORY PROTECTION. IF RESPIRATORY IRRITATION, DIZZINESS, NAUSEA, OR UNCONSCIOUSNESS OCCURS, SEEK IMMEDIATE MEDICAL ASSISTANCE. IF BREATHING HAS STOPPED, ASSIST VENTILATION WITH A MECHANICAL DEVICE OR USE MOUTH-TO-MOUTH RESUSCITATION.

SKIN CONTACT:
WASH CONTACT AREAS WITH SOAP AND WATER. IF PRODUCT IS INJECTED INTO OR UNDER THE SKIN, OR INTO ANY PART OF THE BODY, REGARDLESS OF THE APPEARANCE OF THE WOUND OR ITS SIZE, THE INDIVIDUAL SHOULD BE EVALUATED IMMEDIATELY BY A PHYSICIAN AS A SURGICAL EMERGENCY. EVEN THOUGH INITIAL SYMPTOMS FROM HIGH PRESSURE INJECTION MAY BE MINIMAL OR ABSENT, EARLY SURGICAL TREATMENT WITHIN THE FIRST FEW HOURS MAY SIGNIFICANTLY REDUCE THE ULTIMATE EXTENT OF INJURY.

EYE CONTACT:
FLUSH THOROUGHLY WITH WATER. IF IRRITATION OCCURS, GET MEDICAL ASSISTANCE.

INGESTION:
FIRST AID IS NORMALLY NOT REQUIRED. SEEK MEDICAL ATTENTION IF DISCOMFORT OCCURS.

SECTION 5 FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA:

APPROPRIATE EXTINGUISHING MEDIA:

USE WATER FOG, FOAM, DRY CHEMICAL OR CARBON DIOXIDE (CO2) TO EXTINGUISH FLAMES.

INAPPROPRIATE EXTINGUISHING MEDIA: STRAIGHT STREAMS OF WATER

FIRE FIGHTING:

FIRE FIGHTING INSTRUCTIONS:
EVACUATE AREA. PREVENT RUNOFF FROM FIRE CONTROL OR DILUTION FROM ENTERING STREAMS, SEWERS, OR DRINKING WATER SUPPLY. FIREFIGHTERS SHOULD USE STANDARD PROTECTIVE EQUIPMENT AND IN ENCLOSED SPACES, SELF-CONTAINED BREATHING APPARATUS (SCBA). USE WATER SPRAY TO COOL FIRE EXPOSED SURFACES AND TO PROTECT PERSONNEL.

HAZARDOUS COMBUSTION PRODUCTS:
SMOKE, FUME, ALDEHYDES, SULFUR OXIDES, INCOMPLETE COMBUSTION PRODUCTS, OXIDES OF CARBON

FLAMMABILITY PROPERTIES:

FLASH POINT [METHOD]: >210C (410F) [ASTM D-92]

FLAMMABLE LIMITS (APPROXIMATE VOLUME % IN AIR):
LEL: 0.9
UEL: 7.0

AUTOIGNITION TEMPERATURE: N/D

SECTION 6 ACCIDENTAL RELEASE MEASURES

NOTIFICATION PROCEDURES:
IN THE EVENT OF A SPILL OR ACCIDENTAL RELEASE, NOTIFY RELEVANT AUTHORITIES IN ACCORDANCE WITH ALL APPLICABLE REGULATIONS. US REGULATIONS REQUIRE REPORTING RELEASES OF THIS MATERIAL TO THE ENVIRONMENT WHICH EXCEED THE APPLICABLE REPORTABLE QUANTITY OR OIL SPILLS WHICH COULD REACH ANY WATERWAY INCLUDING INTERMITTENT DRY CREEKS. THE NATIONAL RESPONSE CENTER CAN BE REACHED AT (800)424-8802.

PROTECTIVE MEASURES:
AVOID CONTACT WITH SPILLED MATERIAL. SEE SECTION 5 FOR FIRE FIGHTING INFORMATION. SEE THE HAZARD IDENTIFICATION SECTION FOR SIGNIFICANT HAZARDS. SEE SECTION 4 FOR FIRST AID ADVICE. SEE SECTION 8 FOR ADVICE ON THE MINIMUM REQUIREMENTS FOR PERSONAL PROTECTIVE EQUIPMENT. ADDITIONAL PROTECTIVE MEASURES MAY BE NECESSARY, DEPENDING ON THE SPECIFIC CIRCUMSTANCES AND/OR THE EXPERT JUDGMENT OF THE EMERGENCY RESPONDERS.

FOR EMERGENCY RESPONDERS:

RESPIRATORY PROTECTION:
RESPIRATORY PROTECTION WILL BE NECESSARY ONLY IN SPECIAL CASES, E.G., FORMATION OF MISTS. HALF-FACE OR FULL-FACE RESPIRATOR WITH FILTER(S) FOR DUST/ORGANIC VAPOR OR SELF CONTAINED BREATHING APPARATUS (SCBA) CAN BE USED DEPENDING ON THE SIZE OF SPILL AND POTENTIAL LEVEL OF EXPOSURE. IF THE EXPOSURE CANNOT BE COMPLETELY CHARACTERIZED OR AN OXYGEN DEFICIENT

ATMOSPHERE IS POSSIBLE OR ANTICIPATED, SCBA IS RECOMMENDED. WORK GLOVES THAT ARE RESISTANT TO HYDROCARBONS ARE RECOMMENDED. GLOVES MADE OF POLYVINYL ACETATE (PVA) ARE NOT WATER-RESISTANT AND ARE NOT SUITABLE FOR EMERGENCY USE. CHEMICAL GOGGLES ARE RECOMMENDED IF SPLASHES OR CONTACT WITH EYES IS POSSIBLE.

SMALL SPILLS:
NORMAL ANTISTATIC WORK CLOTHES ARE USUALLY ADEQUATE.

LARGE SPILLS:
FULL BODY SUIT OF CHEMICAL RESISTANT, ANTISTATIC MATERIAL IS RECOMMENDED.

SPILL MANAGEMENT:

LAND SPILL:
STOP LEAK IF YOU CAN DO IT WITHOUT RISK. RECOVER BY PUMPING OR WITH SUITABLE ABSORBENT.

WATER SPILL:
STOP LEAK IF YOU CAN DO IT WITHOUT RISK. CONFINE THE SPILL IMMEDIATELY WITH BOOMS. WARN OTHER SHIPPING. REMOVE FROM THE SURFACE BY SKIMMING OR WITH SUITABLE ABSORBENTS. SEEK THE ADVICE OF A SPECIALIST BEFORE USING DISPERSANTS.

WATER SPILL AND LAND SPILL RECOMMENDATIONS ARE BASED ON THE MOST LIKELY SPILL SCENARIO FOR THIS MATERIAL; HOWEVER, GEOGRAPHIC CONDITIONS, WIND, TEMPERATURE, (AND IN THE CASE OF A WATER SPILL) WAVE AND CURRENT DIRECTION AND SPEED MAY GREATLY INFLUENCE THE APPROPRIATE ACTION TO BE TAKEN. FOR THIS

REASON, LOCAL EXPERTS SHOULD BE CONSULTED.

NOTE: LOCAL REGULATIONS MAY PRESCRIBE OR LIMIT ACTION TO BE TAKEN.

ENVIRONMENTAL PRECAUTIONS:

LARGE SPILLS:
DIKE FAR AHEAD OF LIQUID SPILL FOR LATER RECOVERY AND DISPOSAL. PREVENT ENTRY INTO WATERWAYS, SEWERS, BASEMENTS OR CONFINED AREAS.

SECTION 7 HANDLING AND STORAGE

HANDLING:
THIS MATERIAL IS NOT INTENDED FOR USE IN AIR COMPRESSORS FOR BREATHING APPLICATIONS. PREVENT SMALL SPILLS AND LEAKAGE TO AVOID SLIP HAZARD. MATERIAL CAN ACCUMULATE STATIC CHARGES WHICH MAY CAUSE AN ELECTRICAL SPARK (IGNITION SOURCE). WHEN THE MATERIAL IS HANDLED IN BULK, AN ELECTRICAL SPARK COULD IGNITE ANY FLAMMABLE VAPORS FROM LIQUIDS OR RESIDUES THAT MAY BE PRESENT (E.G., DURING SWITCH-LOADING OPERATIONS). USE PROPER BONDING AND/OR GROUND PROCEDURES. HOWEVER, BONDING AND GROUNDS MAY NOT ELIMINATE THE HAZARD FROM STATIC ACCUMULATION. CONSULT LOCAL APPLICABLE STANDARDS FOR GUIDANCE. ADDITIONAL REFERENCES INCLUDE AMERICAN PETROLEUM INSTITUTE 2003 (PROTECTION AGAINST IGNITIONS ARISING OUT OF STATIC, LIGHTNING AND STRAY CURRENTS) OR NATIONAL FIRE PROTECTION AGENCY 77 (RECOMMENDED PRACTICE ON STATIC ELECTRICITY) OR CENELEC CLC/TR 50404 (ELECTROSTATICS - CODE OF

PRACTICE FOR THE AVOIDANCE OF HAZARDS DUE TO STATIC ELECTRICITY).

STATIC ACCUMULATOR: THIS MATERIAL IS A STATIC ACCUMULATOR.

STORAGE:
THE CONTAINER CHOICE, FOR EXAMPLE STORAGE VESSEL, MAY EFFECT STATIC ACCUMULATION AND DISSIPATION. DO NOT STORE IN OPEN OR UNLABELLED CONTAINERS. KEEP AWAY FROM INCOMPATIBLE MATERIALS.

SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE LIMITS/STANDARDS FOR MATERIALS THAT CAN BE FORMED WHEN HANDLING THIS PRODUCT:

WHEN MISTS/AEROSOLS CAN OCCUR THE FOLLOWING ARE RECOMMENDED:
5 MG/M3 - ACGIH TLV (INHALABLE FRACTION), 5 MG/M3 - OSHA PEL.

NOTE:
LIMITS/STANDARDS SHOWN FOR GUIDANCE ONLY. FOLLOW APPLICABLE REGULATIONS.

ENGINEERING CONTROLS:
THE LEVEL OF PROTECTION AND TYPES OF CONTROLS NECESSARY WILL VARY DEPENDING UPON POTENTIAL EXPOSURE CONDITIONS.

CONTROL MEASURES TO CONSIDER:
NO SPECIAL REQUIREMENTS UNDER ORDINARY CONDITIONS OF USE AND WITH ADEQUATE VENTILATION.

PERSONAL PROTECTION:
PERSONAL PROTECTIVE EQUIPMENT SELECTIONS VARY BASED ON POTENTIAL EXPOSURE CONDITIONS SUCH AS APPLICATIONS, HANDLING PRACTICES, CONCENTRATION AND VENTILATION. INFORMATION ON THE SELECTION OF PROTECTIVE EQUIPMENT FOR USE WITH THIS MATERIAL, AS PROVIDED BELOW, IS BASED UPON INTENDED, NORMAL USAGE.

RESPIRATORY PROTECTION:
IF ENGINEERING CONTROLS DO NOT MAINTAIN AIRBORNE CONTAMINANT CONCENTRATIONS AT A LEVEL WHICH IS ADEQUATE TO PROTECT WORKER HEALTH, AN APPROVED RESPIRATOR MAY BE APPROPRIATE. RESPIRATOR SELECTION, USE, AND MAINTENANCE MUST BE IN ACCORDANCE WITH REGULATORY REQUIREMENTS, IF APPLICABLE.

TYPES OF RESPIRATORS TO BE CONSIDERED FOR THIS MATERIAL INCLUDE:
NO SPECIAL REQUIREMENTS UNDER ORDINARY CONDITIONS OF USE AND WITH ADEQUATE VENTILATION.

FOR HIGH AIRBORNE CONCENTRATIONS, USE AN APPROVED SUPPLIED-AIR RESPIRATOR, OPERATED IN POSITIVE PRESSURE MODE. SUPPLIED AIR RESPIRATORS WITH AN ESCAPE BOTTLE MAY BE APPROPRIATE WHEN OXYGEN LEVELS ARE INADEQUATE, GAS/VAPOR WARNING PROPERTIES ARE POOR, OR IF AIR PURIFYING FILTER CAPACITY/RATING MAY BE EXCEEDED.

HAND PROTECTION:
ANY SPECIFIC GLOVE INFORMATION PROVIDED IS BASED ON PUBLISHED LITERATURE AND GLOVE MANUFACTURER DATA. GLOVE SUITABILITY AND BREAKTHROUGH TIME WILL DIFFER DEPENDING ON THE SPECIFIC USE CONDITIONS. CONTACT THE GLOVE

MANUFACTURER FOR SPECIFIC ADVICE ON GLOVE SELECTION AND BREAKTHROUGH TIMES FOR YOUR USE CONDITIONS. INSPECT AND REPLACE WORN OR DAMAGED GLOVES.

THE TYPES OF GLOVES TO BE CONSIDERED FOR THIS MATERIAL INCLUDE:
NO PROTECTION IS ORDINARILY REQUIRED UNDER NORMAL CONDITIONS OF USE.

EYE PROTECTION:
IF CONTACT IS LIKELY, SAFETY GLASSES WITH SIDE SHIELDS ARE RECOMMENDED.

SKIN AND BODY PROTECTION:
ANY SPECIFIC CLOTHING INFORMATION PROVIDED IS BASED ON PUBLISHED LITERATURE OR MANUFACTURER DATA.

THE TYPES OF CLOTHING TO BE CONSIDERED FOR THIS MATERIAL INCLUDE:
NO SKIN PROTECTION IS ORDINARILY REQUIRED UNDER NORMAL CONDITIONS OF USE.
IN ACCORDANCE WITH GOOD INDUSTRIAL HYGIENE PRACTICES, PRECAUTIONS SHOULD BE TAKEN TO AVOID SKIN CONTACT.

SPECIFIC HYGIENE MEASURES:
ALWAYS OBSERVE GOOD PERSONAL HYGIENE MEASURES, SUCH AS WASHING AFTER HANDLING THE MATERIAL AND BEFORE EATING, DRINKING, AND/OR SMOKING. ROUTINELY WASH WORK CLOTHING AND PROTECTIVE EQUIPMENT TO REMOVE CONTAMINANTS. DISCARD CONTAMINATED CLOTHING AND FOOTWEAR THAT CANNOT BE CLEANED. PRACTICE GOOD HOUSEKEEPING.

ENVIRONMENTAL CONTROLS: SEE SECTIONS 6, 7, 12, 13.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

NOTE:
PHYSICAL AND CHEMICAL PROPERTIES ARE PROVIDED FOR SAFETY, HEALTH AND ENVIRONMENTAL CONSIDERATIONS ONLY AND MAY NOT FULLY REPRESENT PRODUCT SPECIFICATIONS. CONTACT THE SUPPLIER FOR ADDITIONAL INFORMATION.

GENERAL INFORMATION:
PHYSICAL STATE: LIQUID
COLOR: AMBER
ODOR: CHARACTERISTIC
ODOR THRESHOLD: N/D

IMPORTANT HEALTH, SAFETY, AND ENVIRONMENTAL INFORMATION:

RELATIVE DENSITY (AT 15 C): 0.879

FLASH POINT [METHOD]: >210C (410F) [ASTM D-92]

FLAMMABLE LIMITS (APPROXIMATE VOLUME % IN AIR):
LEL: 0.9
UEL: 7.0

AUTOIGNITION TEMPERATURE: N/D

BOILING POINT / RANGE: >316C (600F)

VAPOR DENSITY (AIR =1): >2 AT 101 KPA

VAPOR PRESSURE: <0.013 KPA (0.1 MMHg) AT 20 C

EVAPORATION RATE (N-BUTYL ACETATE = 1): N/D

PH: N/A

LOG POW (N-OCTANOL/WATER PARTITION COEFFICIENT): >3.5

SOLUBILITY IN WATER: NEGLIGIBLE

VISCOSITY: 100 CST (100 MM2/SEC) AT 40 C

OXIDIZING PROPERTIES: SEE HAZARDS IDENTIFICATION SECTION.

OTHER INFORMATION:
FREEZING POINT: N/D
MELTING POINT: N/A
POUR POINT: -9 DEG. C (16 DEG. F)
DMSO EXTRACT (MINERAL OIL ONLY), IP-346: <3 %WT

SECTION 10 STABILITY AND REACTIVITY

STABILITY: MATERIAL IS STABLE UNDER NORMAL CONDITIONS.

CONDITIONS TO AVOID: EXCESSIVE HEAT. HIGH ENERGY SOURCES OF IGNITION.

MATERIALS TO AVOID: STRONG OXIDIZERS

HAZARDOUS DECOMPOSITION PRODUCTS:
MATERIAL DOES NOT DECOMPOSE AT AMBIENT TEMPERATURES.

HAZARDOUS POLYMERIZATION: WILL NOT OCCUR.

SECTION 11 TOXICOLOGICAL INFORMATION

ACUTE TOXICITY:

ROUTE OF EXPOSURE CONCLUSION / REMARKS

INHALATION:

TOXICITY (RAT): MINIMALLY TOXIC. BASED ON TEST DATA FOR
LC50: >5000 MG/M3 STRUCTURALLY SIMILAR MATERIALS.

IRRITATION: NEGLIGIBLE HAZARD AT AMBIENT/NORMAL
HANDLING
NO END POINT DATA. TEMPERATURES BASED ON ASSESSMENT OF THE
COMPONENTS

INGESTION:

TOXICITY (RAT): MINIMALLY TOXIC. BASED ON TEST DATA FOR
LD50: >2000 MG/KG STRUCTURALLY SIMILAR MATERIALS.

SKIN:

TOXICITY (RABBIT): MINIMALLY TOXIC. BASED ON TEST DATA FOR
LD50: >2000 MG/KG STRUCTURALLY SIMILAR MATERIALS.

IRRITATION (RABBIT): NEGLIGIBLE IRRITATION TO SKIN AT AMBIENT
DATA AVAILABLE TEMPERATURES. BASED ON TEST DATA FOR
STRUCTURALLY SIMILAR MATERIALS.

EYE:

IRRITATION (RABBIT): MAY CAUSE MILD, SHORT-LASTING DISCOMFORT TO
DATA AVAILABLE EYES BASED ON TEST DATA FOR STRUCTURALLY
SIMILAR MATERIALS.

CHRONIC/OTHER EFFECTS:

CONTAINS:
BASE OIL SEVERELY REFINED: NOT CARCINOGENIC IN ANIMAL STUDIES.
REPRESENTATIVE MATERIAL PASSES IP-346, MODIFIED AMES TEST, AND/OR OTHER
SCREENING TESTS. DERMAL AND INHALATION STUDIES SHOWED MINIMAL EFFECTS; LUNG
NON-SPECIFIC INFILTRATION OF IMMUNE CELLS, OIL DEPOSITION AND MINIMAL
GRANULOMA FORMATION. NOT SENSITIZING IN TEST ANIMALS.

ADDITIONAL INFORMATION IS AVAILABLE BY REQUEST.

THE FOLLOWING INGREDIENTS ARE CITED ON THE LISTS BELOW: NONE.

REGULATORY LISTS SEARCHED:
1 = NTP CARC
2 = NTP SUS
3 = IARC 1
4 = IARC 2A
5 = IARC 2B
6 = OSHA CARC

SECTION 12 ECOLOGICAL INFORMATION

THE INFORMATION GIVEN IS BASED ON DATA AVAILABLE FOR THE MATERIAL, THE
COMPONENTS OF THE MATERIAL, AND SIMILAR MATERIALS.

ECOTOXICITY:
MATERIAL: NOT EXPECTED TO BE HARMFUL TO AQUATIC ORGANISMS.

MOBILITY:
BASE OIL COMPONENT:
LOW SOLUBILITY AND FLOATS AND IS EXPECTED TO MIGRATE FROM WATER TO THE LAND.
EXPECTED TO PARTITION TO SEDIMENT AND WASTEWATER SOLIDS.

PERSISTENCE AND DEGRADABILITY:

BIODEGRADATION:
BASE OIL COMPONENT: EXPECTED TO BE INHERENTLY BIODEGRADABLE

BIOACCUMULATION POTENTIAL:
BASE OIL COMPONENT:
HAS THE POTENTIAL TO BIOACCUMULATE, HOWEVER METABOLISM OR PHYSICAL PROPERTIES MAY REDUCE THE BIOCONCENTRATION OR LIMIT BIOAVAILABILITY.

SECTION 13 DISPOSAL CONSIDERATIONS

DISPOSAL RECOMMENDATIONS BASED ON MATERIAL AS SUPPLIED. DISPOSAL MUST BE IN ACCORDANCE WITH CURRENT APPLICABLE LAWS AND REGULATIONS, AND MATERIAL CHARACTERISTICS AT TIME OF DISPOSAL.

DISPOSAL RECOMMENDATIONS:
PRODUCT IS SUITABLE FOR BURNING IN AN ENCLOSED CONTROLLED BURNER FOR FUEL VALUE OR DISPOSAL BY SUPERVISED INCINERATION AT VERY HIGH TEMPERATURES TO PREVENT FORMATION OF UNDESIRABLE COMBUSTION PRODUCTS. PROTECT THE ENVIRONMENT. DISPOSE OF USED OIL AT DESIGNATED SITES. MINIMIZE SKIN CONTACT.

DO NOT MIX USED OILS WITH SOLVENTS, BRAKE FLUIDS OR COOLANTS.

REGULATORY DISPOSAL INFORMATION:

RCRA INFORMATION:
THE UNUSED PRODUCT, IN OUR OPINION, IS NOT SPECIFICALLY LISTED BY THE EPA AS A HAZARDOUS WASTE (40 CFR, PART 261D), NOR IS IT FORMULATED TO CONTAIN MATERIALS WHICH ARE LISTED AS HAZARDOUS WASTES. IT DOES NOT EXHIBIT THE HAZARDOUS CHARACTERISTICS OF IGNITABILITY, CORROSITIVITY OR REACTIVITY AND IS NOT FORMULATED WITH CONTAMINANTS AS DETERMINED BY THE TOXICITY CHARACTERISTIC LEACHING PROCEDURE (TCLP). HOWEVER, USED PRODUCT MAY BE REGULATED.

EMPTY CONTAINER WARNING:
EMPTY CONTAINER WARNING (WHERE APPLICABLE):
EMPTY CONTAINERS MAY CONTAIN RESIDUE AND CAN BE DANGEROUS. DO NOT ATTEMPT TO REFILL OR CLEAN CONTAINERS WITHOUT PROPER INSTRUCTIONS. EMPTY DRUMS SHOULD BE COMPLETELY DRAINED AND SAFELY STORED UNTIL APPROPRIATELY RECONDITIONED OR DISPOSED. EMPTY CONTAINERS SHOULD BE TAKEN FOR RECYCLING, RECOVERY, OR DISPOSAL THROUGH SUITABLY QUALIFIED OR LICENSED CONTRACTOR AND IN ACCORDANCE WITH GOVERNMENTAL REGULATIONS. DO NOT PRESSURISE, CUT, WELD, BRAZE, SOLDER, DRILL, GRIND, OR EXPOSE SUCH CONTAINERS TO HEAT, FLAME, SPARKS, STATIC ELECTRICITY, OR OTHER SOURCES OF IGNITION. THEY MAY EXPLODE AND CAUSE INJURY OR DEATH.

SECTION 14 TRANSPORT INFORMATION

LAND (DOT): NOT REGULATED FOR LAND TRANSPORT

LAND (TDG): NOT REGULATED FOR LAND TRANSPORT

SEA (IMDG): NOT REGULATED FOR SEA TRANSPORT ACCORDING TO IMDG-CODE

AIR (IATA): NOT REGULATED FOR AIR TRANSPORT

SECTION 15 REGULATORY INFORMATION

OSHA HAZARD COMMUNICATION STANDARD:
WHEN USED FOR ITS INTENDED PURPOSES, THIS MATERIAL IS NOT CLASSIFIED AS HAZARDOUS IN ACCORDANCE WITH OSHA 29 CFR 1910.1200.

COMPLIES WITH THE FOLLOWING NATIONAL/REGIONAL CHEMICAL INVENTORY REQUIREMENTS: PICCS, KECI, TSCA, EINECS, DSL, AICS, IECSC

SPECIAL CASES:

INVENTORY STATUS

ENCS RESTRICTIONS APPLY

EPCRA: THIS MATERIAL CONTAINS NO EXTREMELY HAZARDOUS SUBSTANCES.

SARA (311/312) REPORTABLE HAZARD CATEGORIES: NONE

SARA (313) TOXIC RELEASE INVENTORY:
THIS MATERIAL CONTAINS NO CHEMICALS SUBJECT TO THE SUPPLIER NOTIFICATION REQUIREMENTS OF THE SARA 313 TOXIC RELEASE PROGRAM.

THE FOLLOWING INGREDIENTS ARE CITED ON THE LISTS BELOW: NONE

REGULATORY LISTS SEARCHED:
1 = ACGIH ALL
2 = ACGIH A1
3 = ACGIH A2
4 = OSHA Z
5 = TSCA 4
6 = TSCA 5A2
7 = TSCA 5E
8 = TSCA 6
9 = TSCA 12B
10 = CA P65 CARC
11 = CA P65 REPRO
12 = CA RTK
13 = IL RTK
14 = LA RTK
15 = MI 293
16 = MN RTK
17 = NJ RTK
18 = PA RTK
19 = RI RTK

CODE KEY:
CARC=CARCINOGEN
REPRO=REPRODUCTIVE

SECTION 16 OTHER INFORMATION

N/D = NOT DETERMINED
N/A = NOT APPLICABLE

THIS SAFETY DATA SHEET CONTAINS THE FOLLOWING REVISIONS:
REVISION CHANGES:
SECTION 09: PHYS/CHEM PROPERTIES NOTE WAS MODIFIED.
SECTION 09: FLASH POINT C(F) WAS MODIFIED.
SECTION 15: NATIONAL CHEMICAL INVENTORY LISTING WAS MODIFIED.
SECTION 08: EXPOSURE LIMITS/STANDARDS WAS MODIFIED.

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INTERNAL USE ONLY:
MHC: 0, 0, 0, 0, 0, 0
PPEC: A

DGN: 2008423XUS (1013559)

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CUSTOMER: 442253
BATCH #: 122760063
ZONE #:302
BARCODE #:9611019095150216641189
PRODUCT NAME: YIELD AEROSOL (VOC COMPLIANT)

ORDER #: 902166
STICKER #: 122760410

Material Safety Data Sheet: YIELD AEROSOL (VOC COMPLIANT)

Supercedes Date 04/06/2010 **Issuing Date 01/13/2011**

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name YIELD AEROSOL (VOC COMPLIANT)
Recommended use Lubricant

Information on Manufacturer
CHEMSEARCH FE DIV. OF NCH CORP.
BOX 152170
IRVING, TX 75015

Product Code 5C68
Chemical nature Solvent blend

Emergency Telephone Number
CHEMTREC 1-800-424-9300

2. HAZARDS IDENTIFICATION

Emergency Overview
DANGER
Extremely flammable
May be harmful if inhaled
Causes skin irritation
Causes eye irritation
May be harmful if swallowed

Color Amber - Dark amber **Physical State** Liquid **Odor** Petroleum distillates

Potential Health Effects

Principle Route of Exposure	Inhalation, Skin contact, Eye contact.
Primary Routes of Entry	Inhalation, Skin Absorption.
Acute Effects	
Eyes	Causes eye irritation.
Skin	Causes skin irritation. Repeated exposure may cause skin dryness or cracking.
Inhalation	May cause irritation of respiratory tract. Inhalation may cause central nervous system effects. May cause central nervous system depression. Symptoms and signs include headache, dizziness, fatigue, muscular weakness, drowsiness and in extreme cases, loss of consciousness.
Ingestion	Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. Aspiration hazard if swallowed - can enter lungs and cause damage. May be fatal if swallowed and enters airways.
Chronic Toxicity	Repeated and prolonged exposure to solvents may cause brain and nervous system damage. Liver and kidney injuries may occur.
Target Organ Effects	Central nervous system, Cardiovascular system, Respiratory system, Liver, Kidney.
Aggravated Medical Conditions	Respiratory system, Skin disorders, Neurological disorders, Liver disorders, Kidney disorders.
Potential Environmental Effects	See Section 12 for additional Ecological information.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Component	CAS-No
Butane	106-97-8
Ethyl acetate	141-78-6
Petroleum distillates, hydrotreated light	64742-47-8
Petroleum distillates, hydrotreated heavy naphthenic (<3% DMSO extractable)	64742-52-5
Petroleum distillates, hydrotreated light naphthenic (<3% DMSO extractable)	64742-53-6
Solvent naphtha (petroleum), medium aliphatic	64742-88-7
Sodium sulfonate	68608-26-4
Propane	74-98-6
Petroleum distillate	8052-41-3

4. FIRST AID MEASURES

General Advice	Avoid breathing vapors, mist, or gas. Avoid contact with skin, eyes and clothing.
Eye Contact	Rinse thoroughly with plenty of water, also under the eyelids. Get medical attention if irritation develops and persists.
Skin Contact	Wash off immediately with plenty of water for at least 15 minutes. Remove contaminated clothing and shoes. Get medical attention if irritation develops and persists. Wash contaminated clothing before re-use.
Inhalation	If inhaled, remove to fresh air. Get medical attention if symptoms occur.
Ingestion	Drink 1 or 2 glasses of water. Do NOT induce vomiting. Get medical attention immediately. Never give anything by mouth to an unconscious person.
Notes to Physician	Aspiration hazard if swallowed - can enter lungs and cause damage.

5. FIRE-FIGHTING MEASURES

Flash Point > 69 °F / > 21 °C **Method** Seta closed cup
Autoignition Temperature No information available.
Flammability Limits in Air % Solvent mixture. **Upper** 11.5 **Lower** 0.5
Suitable Extinguishing Media
Water spray. Carbon dioxide (CO2). Foam. Dry chemical.
Specific hazards arising from the chemical
Solvent vapers are heavier than air and may spread along floors. Vapors may ignite and explode. Flame extension: >24 inches / >61 cm and Burnback: >3 inches / >7.5 cm. Material can create slippery conditions.
Protective Equipment and Precautions for Firefighters
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.
Aerosol Level (NFPA 30B) - 3
NFPA **Health** 2 **Flammability** 4 **Instability** 0

HMIS	Health 2	Flammability 4	Instability 0

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions Use personal protective equipment. Remove all sources of ignition. Prevent further leakage or spillage if safe to do so. Material can create slippery conditions.

Environmental Precautions Do not flush into surface water or sanitary sewer system.

Methods for Containment Contain spillage, soak up with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and transfer to a container for disposal according to local / national regulations (see section 13).

Methods for Cleaning Up Use clean non-sparking tools to collect absorbed material. Pick up and transfer to properly labeled containers.

Neutralizing Agent Not applicable.

7. HANDLING AND STORAGE

Handling Keep away from heat and sources of ignition. Avoid breathing vapors or mists. Avoid contact with skin, eyes and clothing.

Storage Keep away from open flames, hot surfaces and sources of ignition.

Storage Temperature Minimum 35 °F / 2 °C Maximum 120 °F / 49 °C

Storage Conditions Indoor X Outdoor Heated Refrigerated

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Guidelines

Component	ACGIH TLV	OSHA PEL	NIOSH
Butane	: 1000 ppm TWA (listed under Aliphatic hydrocarbon gases: Alkane C1-4) : 1000 ppm TWA	No data available	: 800 ppm TWA; 1900 mg/m^3 TWA
Ethyl acetate	: 400 ppm TWA	: 400 ppm TWA; 1400 mg/m^3 TWA	: 2000 ppm IDLH (10% LEL) : 400 ppm TWA; 1400 mg/m^3 TWA
Petroleum distillates, hydrotreated light	5 mg/m^3 as oil mist	10 mg/m^3 as oil mist	No data available
Petroleum distillates, hydrotreated heavy naphthenic (<3% DMSO extractable)	TWA: 5 mg/m^3; STEL: 10 mg/m^3	TWA: 5 mg/m^3	IDLH: 2,500 mg/m^3; STEL 10 mg/m^3; TWA: 5 mg/m^3
Petroleum distillates, hydrotreated light naphthenic (<3% DMSO extractable)	5 mg/m^3 as oil mist	10 mg/m^3 as oil mist	No data available
Solvent naphtha (petroleum), medium aliphatic	No data available	No data available	No data available
Sodium sulfonate	No data available	No data available	No data available
Propane	: 1000 ppm TWA (listed under Aliphatic hydrocarbon gases: Alkane C1-4) : 1000 ppm TWA	: 1000 ppm TWA; 1800 mg/m^3 TWA	: 2100 ppm IDLH (10% LEL) : 1000 ppm TWA; 1800 mg/m^3 TWA
Petroleum distillate	: 100 ppm TWA	: 500 ppm TWA; 2900 mg/m^3 TWA	: 20000 mg/m^3 IDLH : 350 mg/m^3 TWA : 1800 mg/m^3 Ceiling (15 min)

Engineering Measures Use with local exhaust ventilation. Ensure adequate ventilation, especially in confined areas.

Personal Protective Equipment

Eye/Face Protection Safety glasses with side-shields.

Skin Protection Wear suitable protective clothing, impervious gloves.

Respiratory Protection In case of inadequate ventilation wear respiratory protection. When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.

General Hygiene Considerations Ensure that eyewash stations and safety showers are close to the workstation location. Remove and wash contaminated clothing before re-use.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Liquid	**Viscosity**	Non viscous
Color	Amber - Dark amber	**Odor**	Petroleum distillates
Appearance	Transparent	**pH**	Not applicable
Specific Gravity	0.840	**Evaporation Rate**	24.5 (Butyl acetate=1)
Percent Volatile (Volume)	74.7	**VOC Content (%)**	41.8
VOC Content (g/L)	330.2	**Vapor Pressure**	1530 mmHg @ 70 °F
Vapor Density	1.7	**Solubility**	Negligible
Boiling Point/Range	> 160 °F / 71 °C		

10. STABILITY AND REACTIVITY

Chemical Stability Stable. Hazardous polymerization does not occur.

Conditions to Avoid Heat, flames, and sparks

Incompatible Products Strong oxidizing agents, Strong acids, Strong bases, Amines, Nitric acid.

Hazardous Decomposition Products Carbon oxides, Nitrogen oxides (NOx), Sulfur oxides, Sulfur compounds, Hydrogen sulfide and smoke, Aldehydes.

Possibility of Hazardous Reactions None under normal processing

11. TOXICOLOGICAL INFORMATION

Product Information No information available.

Component Information

Acute Toxicity

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation	Draize Test	Other
Butane	no data available	no data available	658 mg/L (Rat) 4 h	no data available	no data available
Ethyl acetate	5620 mg/kg (Rat)	18000 mg/kg (Rabbit) 20 mL/kg (Rabbit)	no data available	no data available	no data available
Petroleum distillates, hydrotreated light	5000 mg/kg (Rat)	2000 mg/kg (Rabbit)	5.2 mg/L (Rat) 4 h	no data available	no data available
Petroleum distillates, hydrotreated heavy naphthenic (<3% DMSO extractable)	5000 mg/kg (Rat)	2000 mg/kg (Rabbit)	2.18 mg/L (Rat) 4 h	no data available	no data available
Petroleum distillates, hydrotreated light naphthenic (<3% DMSO extractable)	5000 mg/kg (Rat)	2000 mg/kg (Rabbit)	2.18 mg/L (Rat) 4 h	no data available	no data available
Solvent naphtha (petroleum), medium aliphatic	5000 mg/kg (Rat)	3000 mg/kg (Rabbit)	5.28 mg/L (Rat) 4 h	no data available	no data available
Sodium sulfonate	no data available	no data available	no data available	no data available	no data available

Propane	no data available	-	658 mg/L (Rat) 4 h	no data available	no data available
Petroleum distillate	500	no data available	no data available	no data available	no data available

Chronic Toxicity

Component	Mutagenicity	Sensitization	Developmental Toxicity	Reproductive Toxicity	Target Organ Effects
Butane	no data available	no data available	no data available	no data available	CNS
Ethyl acetate	no data available	no data available	no data available	no data available	eyes, respiratory system, skin
Petroleum distillates, hydrotreated light	no data available	no data available	no data available	no data available	CNS, cardiovascular system, respiratory system, liver, kidney
Petroleum distillates, hydrotreated heavy naphthenic (<3% DMSO extractable)	no data available	no data available	no data available	no data available	respiratory system
Petroleum distillates, hydrotreated light naphthenic (<3% DMSO extractable)	no data available	no data available	no data available	no data available	CNS
Solvent naphtha (petroleum), medium aliphatic	no data available	no data available	no data available	no data available	CNS, liver, kidneys
Sodium sulfonate	no data available	no data available	no data available	no data available	no data available
Propane	no data available	no data available	no data available	no data available	CNS
Petroleum distillate	no data available	no data available	no data available	no data available	eyes, CNS, respiratory system, skin, kidneys

Carcinogenicity There are no known carcinogenic chemicals in this product.

Component	ACGIH	IARC	NTP	OSHA	Other
Butane	not applicable	not applicable	not applicable	not applicable	not applicable
Ethyl acetate	not applicable	not applicable	not applicable	not applicable	not applicable
Petroleum distillates, hydrotreated light	not applicable	not applicable	not applicable	not applicable	not applicable
Petroleum distillates, hydrotreated heavy naphthenic (<3% DMSO extractable)	not applicable	not applicable	not applicable	not applicable	not applicable
Petroleum distillates, hydrotreated light naphthenic (<3% DMSO extractable)	not applicable	not applicable	not applicable	not applicable	not applicable
Solvent naphtha (petroleum), medium aliphatic	not applicable	not applicable	not applicable	not applicable	not applicable
Sodium sulfonate	not applicable	not applicable	not applicable	not applicable	not applicable
Propane	not applicable	not applicable	not applicable	not applicable	not applicable
Petroleum distillate	not applicable	not applicable	not applicable	not applicable	not applicable

12. ECOLOGICAL INFORMATION

Product Information
No information available.
Component Information

Component	Toxicity to Algae	Toxicity to Fish	Microtox	Water Flea	log Pow
Butane	no data available	no data available	no data available	no data available	2.89
Ethyl acetate	EC50 = 3300 mg/L Desmodesmus subspicatus 48 h	LC50 220-250 mg/L Pimephales promelas 96 h LC50 352-500 mg/L Oncorhynchus mykiss 96 h LC50 = 484 mg/L Oncorhynchus mykiss 96 h	EC50 = 1180 mg/L 5 min EC50 = 1500 mg/L 15 min EC50 = 5870 mg/L 15 min EC50 = 7400 mg/L 2 h	= 560 mg/L 48 h	0.6
Petroleum distillates, hydrotreated light	no data available	LC50 = 2.2 mg/L Lepomis macrochirus 96 h LC50 = 2.4 mg/L Oncorhynchus mykiss 96 h LC50 = 45 mg/L Pimephales promelas 96 h	no data available	= 4720 mg/L 96 h	N/A
Petroleum distillates, hydrotreated heavy naphthenic (<3% DMSO extractable)	no data available	LC50 > 5000 mg/L Oncorhynchus mykiss 96 h	no data available	> 1000 mg/L 48 h	N/A
Petroleum distillates, hydrotreated light naphthenic (<3% DMSO extractable)	no data available	LC50 > 5000 mg/L Oncorhynchus mykiss 96 h	no data available	> 1000 mg/L 48 h	N/A
Solvent naphtha (petroleum), medium aliphatic	EC50 = 450 mg/L Pseudokirchneriella subcapitata 96 h	LC50 = 800 mg/L Pimephales promelas 96 h	no data available	> 100 mg/L 48 h	N/A
Sodium sulfonate	no data available	no data available	no data available	no data available	N/A
Propane	no data available	no data available	no data available	no data available	2.8
Petroleum distillate	no data available	no data available	no data available	no data available	N/A

Persistence and Degradability No information available.
Bioaccumulation No information available.
Mobility No information available.

13. DISPOSAL CONSIDERATIONS

Product Disposal Dispose of in accordance with local regulations.
Container Disposal Contents under pressure Do not puncture. Empty remaining contents. Empty containers should be taken for local recycling, recovery, or waste disposal. Do not re-use empty containers.

14. TRANSPORT INFORMATION

DOT
Proper Shipping Name Consumer Commodity
Hazard Class ORM-D
Description Consumer Commodity, ORM-D

TDG
Proper shipping name Consumer Commodity
Hazard Class ORM-D
UN-No UN1950
Description Consumer Commodity, ORM-D

ICAO
UN-No UN1950
Proper Shipping Name Aerosols, flammable
Hazard Class 2.1
Shipping Description UN1950, Aerosols, flammable, 2.1, LTD QTY

IATA
UN-No UN1950
Proper Shipping Name Aerosols, flammable
Hazard Class 2.1

ERG Code	126
Shipping Description	UN1950,Aerosols,flammable,2.1, LTD QTY

IMDG/IMO

Proper Shipping Name	Aerosols, flammable
Hazard Class	2.1
UN-No	UN1950
EmS No.	F-A, S-A
Shipping Description	UN1950, Aerosols, flammable,2.1,LTD QTY

15. REGULATORY INFORMATION

Inventories

TSCA	Complies
DSL	Complies

U.S. Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and and Title 40n of the Code of Federal Regulations, Part 372.

SARA 311/312 Hazardous Categorization

Acute Health Hazard	Chronic Health Hazard	Fire Hazard	Sudden Release of Pressure Hazard	Reactive Hazard
Yes	Yes	Yes	Yes	No

CERCLA

Component	Hazardous Substances RQs	CERCLA EHS RQs
Butane	Not applicable	Not applicable
Ethyl acetate	Not applicable	Not applicable
Petroleum distillates, hydrotreated light	Not applicable	Not applicable
Petroleum distillates, hydrotreated heavy naphthenic (<3% DMSO extractable)	Not applicable	Not applicable
Petroleum distillates, hydrotreated light naphthenic (<3% DMSO extractable)	Not applicable	Not applicable
Solvent naphtha (petroleum), medium aliphatic	Not applicable	Not applicable
Sodium sulfonate	Not applicable	Not applicable
Propane	Not applicable	Not applicable
Petroleum distillate	Not applicable	Not applicable

U.S. State Regulations

California Proposition 65 This product does not contain any Proposition 65 chemicals.

Canada

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

WHMIS Hazard Class

A Compressed gases, B2 Flammable liquid, D2B Toxic materials.

16. OTHER INFORMATION

Prepared By	Dan Hollas
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List of References.	No information available.

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