

MFA-50 Safety Data Sheet

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

1.1. Identification

Product name : MFA-50 Magnetic Crack Detection Oil

1.2. Recommended Use of The Chemical and Restrictions on Use

Recommended Use : For the detection of cracks in ferrous materials.

Restrictions : None Identified

1.3. Details of the Supplier of the Safety Data Sheet

Distributor : Goodson Manufacturing Company

156 Galewski Drive

Winona, MN 55987-0847 - USA

T 507-452-1830 F 507-452-2907

1.4. Emergency telephone number

Emergency number : 800-924-6804 (24 hours)

Please Note MFA-50 is A 2-PART SDS.

Saftey Data Sheets for each component follow.

Classification of the Substance or Mixture

Classification : This product has been classified in accordance with the hazard communication

standard 29 CFR 1910.1200; the SDS and labels contain all the information as

required by the standard.

Emergency Overview : Danger.

Form : Liquid

Physical State : Liquid

Color : Dark Green

Odor : Mild Hydrocarbon

OSHA Hazards : Combustible Liquid

Flammable Liquids : Category 4
Aspiration Hazard : Category 1



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Date of Issue: 11/20/2014, Version 1.7 Supersedes All Previous MSDS/SDS

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

1.1. Identification

Product name : MFA-OIL Magnetic Crack Detection Oil Carrier

Also Known As : Soltrol® 170 Isoparaffin

Material : 1017358, 1017353, 1017352, 1017355, 1017357, 1017359, 1017354, 1017356

1.2. Details of the supplier of the safety data sheet

Distributor : Goodson Manufacturing Company

156 Galewski Drive

Winona, MN 55987-0847 - USA

T 507-452-1830

1.3. Emergency telephone number

Emergency number : 800-924-6804 (24 hours)

SECTION 2: Hazard(s) Identification

2.1. Classification of the Substance or Mixture

Classification : This product has been classified in accordance with the hazard communication

standard 29 CFR 1910.1200; the SDS and labels contain all the information as

required by the standard.

Emergency Overview : Danger.
Form : Liquid
Physical State : Liquid

Color : Colorless at room temperature

Odor : Mild Hydrocarbon
OSHA Hazards : Combustible Liquid

Flammable Liquids : Category 4
Aspiration Hazard : Category 1

2.2. Label elements

GHS-US labeling

Hazard pictograms (GHS-US)

Signal word (GHS-US) : Danger

Hazard statements (GHS-US) : Combustible Liquid.

May be fatal if swallowed and enters airways.

Precautionary statements (GHS-US) : Keep away from heat/sparks/open flames/hot surfaces. No smoking. Wear

protective gloves/eye protection/face protection.

Response : If swallowed: Immediately call a poison control center or doctor/physician. Do

NOT induce vomiting.

In Case of Fire: Use dry sand, dry chemical or alcohol-resistant foam to

extinguish.

Storage : Store in a well-ventilated place. Keep cool. Store locked up.

Disposal : Dispose of contents/containers to an approved waste disposal plant.

Carcinogenicity : IARC : No ingredient of this product present at levels greater than or equal to

0.1% is identified as a probable, possible or confirmed human carcinogen

by IARC.

NPT: No ingredient of this product present at levels greater than or equal to 0.1% is identified as a probable, possible or confirmed human carcinogen

by NTP.



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Carcinogenicity (continued) : ACGIH : No ingredient of this product present at levels greater than or equal

to 0.1% is identified as a probable, possible or confirmed human

carcinogen by ACGIH.

SECTION 3: Composition/information on ingredients

Synonyms : None established.

Molecular Formula : UVCB

 Component
 CAS Number
 Weight %

 C12-C14 Isoalkanes
 0068551-19-9
 100%

SECTION 4: First Aid Measures

4.1. Description of Necessary First Aid Measures

General Advice : Move out of dangerous area. Show this safety data sheet to the doctor in

attendance. Symptoms of poisoning may appear several hours later. Do not leave

victim unattended.

If Inhaled : If unconscious, place in recovery position and seek medical advice. If symptoms

persist, call a doctor/physician.

In Case of Skin Contact : If on skin, rinse well with water. If on clothes, remove clothes.

In Case of Eye Contact : Flush eyes with water as a precaution. Remove contact lenses if present and easy

to do so. Protect unharmed eye. Keep eye wide open while rinsing. If eye irritation

persists, consult a specialist.

If swallowed : Immediately take victim to hospital. Keep respiratory tract clear. Never give

anything by mouth to an unconscious person. If symptoms persist, call a

physician.

SECTION 5: Fire-Fighting Measures

Flash Point : > 79.4°C (>174.9°F)

Method: Tag closed cup.

Autoignition Temperature : No data available.

Suitable Extinguishing Media : Alcohol-resistant foam. Carbon dioxide (CO2). Dry chemical.

Unsuitable Extinguishing Media

Special Protective Equipment

: High volume water jet.

for Firefighters : Wear self-contained breathing apparatus for firefighting if necessary.

Further Information : For safety reasons in case of fire, cans shold be stored separately in closed

containments. Use a water spray to cool fully closed containers.

Fire & Explosion Protection : Do not spray on an open flame or any other incandescent material. Keep away

from open flames, hot surfaces and sources of ignition.

Hazardous Decomposition Products : Carbon Dioxide. Carbon Oxides.

SECTION 6: Accidental Release Measures

Personal Precautions : Use personal protective equipment. Ensure adequate ventilation.

Environmental Precautions : Prevent product from entering drains. Prevent further leakage or spillage if safe

to do so. If the product contaminates rivers and lakes or drains, inform respective

authorities.

Methods for Clean Up : Contain spillage and then collect with non-combustible absorbent material (e.g.

sand, earth, diatomaceous earth, vermiculite) and place in a container for disposal according to local / national regulations (see Section 13). Keep in suitable, closed

containers for disposal.



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SECTION 7: Handling and Storage

7.1. Precautions for Safe Handling

Advice on Safe Handling : A

: Avoid formation of aerosol. Do not breath vapors/dust. For personal protection see section 8. Smoking, eating and drinking should be prohibited in the application area. Provide sufficient air exchange and/or exhaust in work rooms. Dispose of rinse water in accordance with local and national regulations.

Protection Against Fire or Explosion

Do not spray on open flame or any other incandescent material. Keep away from

open flames, hot surfaces and sources of ignition.

7.2. Conditions for Safe Storage, Including Any Incompatibilities

Storage conditions : No smoking. Keep container tightly closed in a dry and well-ventilated place.

Observe label precautions. Electrical installations/working materials must comply

with the technological safety standards.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Chevron Phillips Chemical Company LP

Ingredients	CAS	Value	Control Parameters	Notes
C12-C14 Isoalkanes	0068551-19-9	TWA	1,200 mg/m ³	RCP

RCP=Reciprocal Calculation Procedure

8.2. Appropriate Engineering Controls

Engineering Controls

: Adequate ventilation to control airborne concentrations below the exposure guidelines/limits. Consider the potential hazards of this material (Section 2), applicable exposure limits, job activities and other substances in the workplace when designing engineering controls and selecting personal protective equipment. If engineering controls or work practices are not adequate to prevent exposure to harmful levels of this material, the personal protective equipment listed below is recommended. The user should read and understand all instructions and limitations supplied with the equipment since protection is usually provided for a limited time or under certain circumstances.

8.3. Individual Protection Measures, Such as Personal Protective Equipment (PPE)

Respiratory Protection

: Wear a supplied-air NIOSH approved respirator unless ventilation or other engineering controls are adequate to maintain minimal oxygen content of 19.5% by volume under normal atmospheric pressure. Wear a NIOSH approved respirator that provides protection when working with this material if exposure to harmful levels of airborne material may occur, such as: Air-Purifying Respirator for Dust and Mists/P100. Use a positive pressure, air-supplying respirator if there is potential for uncontrolled release, exposure levels are not known or other circumstances where air-purifying respirators may not provide adequate protection.

Hand Protection

: The suitability for a specific workplace should be discussed with the producers of the protective gloves. Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion and the contact time. Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough.

Eye Protection

Eye wash bottle with pure water. Tightly fitting safety goggles.

Skin and Body Protection

: Choose body protection according to the amount and concentration of the dangerous substance at the work place. Wear as appropriate: Protective suit(s).

Protective shoes.

Hygiene Measures

: Do not eat, drink or smoke when using. Wash hands thoroughly before breaks and at the end of the workday.

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SECTION 9: Physical and Chemical Properties

Form : Liquid
Physical State : Liquid

Color : Colorless at room temperature

Odor : Mild, Hydrocarbon Flash Point : > 79.4°C (> 174.9°F)

Method: Tag closed cup

Lower Explosion Limit : No data available
Upper Explosion Limit : No data available

Oxidizing Properties : No

Autoignition Temperature : No data available Thermal Decomposition : No data available

Molecular Formula : UVCB

Molecular Weight : Not applicable

pH : 7

Pour Point : No data available

Boiling Point/Boiling Range : 217° to 246°C (423° to 475°F) Vapor Pressure : 0.70 MMHG at 37.8°C (100.0°F)

Relative Density : 0.78, 15.6°C (60.1°F)

Water Solubility : Negligible

Partition Coefficient: n-octanol/water : No data available
Viscosity, Kinematic : 2.6 cSt at 38°C (100°F)

Relative Vapor Density (Air =1) : 3 Evaporation Rate : 0.01

SECTION 10: Stability and Reactivity

Chemical Stability : This material is considered stable under normal ambient and anticipated storage

and handling conditions of temperature and pressure.

Conditions to Avoid : Heat, flames and sparks.

Materials to Avoid : May react with oxygen and strong oxidizing agents such as chlorates, nitrates,

peroxides, etc.

Thermal Decomposition : No data available

Hazardous Decomposition Products : Carbon Dioxide. Carbon Oxides.

Other Data : No decomposition if stored and applied as directed.

SECTION 11: Toxicological Information

Acute Oral Toxicity C12-C14 Isoalkanes: LD₅₀: >5000 mg/kg, Species: Rat, Method: OECD Test Guideline 401

Information given is based on data obtained from similar substances

Acute Inhalation Toxicity

C12-C14 Isoalkanes : LC_{50} : >5.3 mg/L, Exposure Time: 4h, Species: Rat, Test Atmosphere: Vapor,

Method: OECD Test Guideline 403

Information given is based on data obtained from similar substances

Skin Irritation C12-C14 Isoalkanes : No skin irritation.

Information given is based on data obtained from similar substances

Eye Irritation C12-C14 Isoalkanes : No eye irritation

Information given is based on data obtained from similar substances

Sensitization C12-C14 Isoalkanes : Classification: Did not cause sensitization on laboratory animals

Information given is based on data obtained from similar substances



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Repeated Dose Toxicity

C12-C14 Isoalkanes

- : Species: Monkey, Application Route: Inhalation, Dose: 0, 654 ppm Exposure: 4 wk; Number of Exposures: 6 h/d, 3 d/wk NOEL: >654 ppm Method: OECD Test Guideline 412
- : Species: Rat, Sex: Male & Female, Application Route: oral gavage, Dose: 0, 25, 150, 1000 mg/kg/d, Exposure Time: 4 wk, Number of Exposures: daily, NOEL: >= 1000 mg/kg/d, Method: OECD Guideline 422 Information given is based on data obtained from similar substances.

Reproductive Toxicity C12-C14 Isoalkanes

- : Species: Rat, Sex: Male, Application Route: oral gavage, Dose 0, 750, 1500, 3000 mg/kg/bw/d, Number of Exposures: daily, Test Period: 90 d, Method: OECD Test Guideline 415, NOAEL Parent: >= 3000 mg/kg/bw/d Information given is based on data obtained from similar substances
- : Species: Rat, Sex: Female, Application Route: oral gavage, Dose 0, 750, 1500 mg/kg/bw/d, Number of Exposures: daily, Test Period: 90 d, Method: OECD Test Guideline 415, NOAEL Parent: >= 1500 mg/kg/bw/d, NOAEL F1: 750 mg/kg/bw/d Information given is based on data obtained from similar substances
- : Species: Rat, Sex: Male & Female, Application Route: inhalation (vapor), Dose 100, 300 ppm, Number of Exposures: 6h/d/5d/wk Test Period: 8 wk, Method: OECD Test Guideline 421, NOAEL Parent: >= 300 ppm, NOAEL F1: >= 300 ppm

Information given is based on data obtained from similar substances

Developmental Toxicity C12-C14 Isoalkanes

- : Species: Rat, Application Route: inhalation, Dose 100, 300 ppm, Exposure Time: GD 6-15, Number of Exposures: 6 h/d, NOAEL Teratogenicity: >= 300 ppm Information given is based on data obtained from similar substances
- : Species: Rat, Application Route: inhalation, Dose 300, 900 ppm, Exposure Time: GD 6-15, Number of Exposures: 6h/d, Method: OECD Test Guideline 414, NOAEL Teratogenicity: >= 900 ppm, NOAEL Maternal: >= 900 ppm Information given is based on data obtained from similar substances
- : Species: Rat, Application Route: oral gavage, Dose 0, 500, 1000, 1500 mg/kg/d, Exposure Time: GD 6-15, Number of Exposures: daily, ethod: OECD Test Guideline 414, NOAEL Teratogenicity: 1000 mg/kg, NOAEL Maternal: 500 mg/kg Information given is based on data obtained from similar substances

Soltrol® 170 Isoparaffin Aspiration Toxicity

: May be fatal if swallowed and enters airways. Substances known to cause human airway toxicity hazards or to be regarded as if they cause human aspiration toxicity hazard.

CMR Effects C12-C14 Isoalkanes

: Carcinogenicity: Limited evidence of carcinogenicity in animal studies Mutagenicity: Test on bacterial or mammalian cell cultures did not show mutagenic effects. In vivo tests did not show mutagenic effects. Teratogenicity: Animal testing did not show any effects on fetal development Reproductive Toxicity: No adverse effects expected.

Soltrol® 170 Isoparaffin Further Information

: Solvents may degrease skin.



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SECTION 12: Ecological Information

Toxicity to Fish C12-C14 Isoalkanes : LL_{so}: > 1,000 mg/l, Exposure time: 96 h, Species: Oncorhynchus mykiss (rainbow

trout), semi-static test Method: OECD Test Guideline 203

Information given is based on data obtained from similar substances.

Toxicity To Daphnia And Other Aquatic Invertebrates

C12-C14 Isoalkanes : EL₅₀: > 1,000 mg/l, Exposure time: 48 h, Species: Daphnia magna (Water flea)

static test Method: OECD Test Guideline 202

Information given is based on data obtained from similar substances.

Toxicity to Algae C12-C14 Isoalkanes: EL_{so}: > 1,000 mg/l, Exposure time: 72 h, Species: Pseudokirchneriella subcapitata

(green algae), Growth inhibition Method: OECD Test Guideline 201 Information given is based on data obtained from similar substances.

Toxicity to Fish (Chronic toxicity)

C12-C14 Isoalkanes : NOELR: 0.316 mg/l, Exposure time: 28 d, Species: Oncorhynchus mykiss

(rainbow trout), Method: QSAR modeled data

Elimination Information (persistence and degradability)

Biodegradability : Expected to be biodegradable

Ecotoxicology Assessment
Results of PBT assessment

C12-C14 Isoalkanes : Non-classified PBT substance, Non-classified vPvB substance

Additional ecological information : No data available

SECTION 13: Disposal Considerations

Note: : This information pertains only to the product as shipped.

Use material for its intended purpose or recycle if possible. This material, if it must be discarded, may meet the criteria for hazardous waste as defined by US EPA under RCRA (40 CFR 261) or other state and local regulations. Measurement of certain physical properties and analysis for regulated components may be necessary to make a correct determination. If this material is classified as a hazardous waste, federal law requires disposal at a licensed hazardous waste

disposal facility.

Product : Do not dispose of waste into sewer. Do not contaminate ponds, waterways or

ditches with chemical or used container. Send to a licensed waste management

company.

Contaminated Packaging : Empty remaining contents. Dispose of as unused product. Do not re-use empty

containers. Do not burn or use a cutting torch on empty packaging.

SECTION 14: Transport Information

The shipping descriptions shown here are for bulk shipments only, and may not apply to shipments in non-bulk packages (see regulatory definition).

Consult the appropriate domestic or international mode-specific and quantity-specific Dangerous Goods Regulations for additional shipping description requirements (e.g., technical name or names, etc.) Therefore, the information shown here, may not always agree with the bill of lading shipping description for the material. Flash points for the material may vary slightly between the SDS and the bill of lading.

US DOT : (UNITED STATES DEPARTMENT OF TRANSPORTATION) not regulated as a

hazardous material or dangerous goods for transportation by this agency. Testing

(ASTM D4206) has shown product does not sustain combustion.

IMO / IMDG : (INTERNATIONAL MARITIME DANGEROUS GOODS) not regulated as a

hazardous material or dangerous goods for transportation by this agency.

IATA : (INTERNATIONAL AIR TRANSPORT ASSOCIATION) not regulated as a hazardous

material or dangerous goods for transportation by this agency.



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ADR : (AGREEMENT ON DANGEROUS GOODS BY ROAD (EUROPE)) not regulated as a

hazardous material or dangerous goods for transportation by this agency.

RID : (REGULATIONS CONCERNING THE INTERNATIONAL TRANSPORT OF

DANGEROUS GOODS (EUROPE)) not regulated as a hazardous material or

dangerous goods for transportation by this agency.

ADN : (EUROPEAN AGREEMENT CONCERNING THE INTERNATIONAL CARRIAGE OF

DANGEROUS GOODS BY INLAND WATERWAYS) not regulated as a hazardous

material or dangerous goods for transportation by this agency.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

SECTION 15: Regulatory Information

National Legislation

SARA 311/312 Hazards : Fire Hazard

EPCRA - EMERGENCY PLANNING COMMUNITY RIGHT - TO - KNOW

CERCLA Reportable Quantity : This material does not contain any components with a CERCLA RQ. SARA 302 Reportable Quantity : This material does not contain any components with a SARA 302 RQ.

SARA 302 Threshold Planning Quantity: SARA 302: No chemicals in this material are subject to the reporting requirements

of SARA Title III. Section 302.

SARA 304 Reportable Quantity : This material does not contain any components with a section 304 EHS RQ.

SARA 313 Ingredients : SARA 313: This material does not contain any chemical components with known

CAS numbers that exceed the threshold (De Minimis) reporting levels established

by SARA Title III, Section 313.

Clean Air Act

Ozone-Depletion Potential : This product neither contains, nor was manufactured with a Class I or Class II

ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A,

App.A + B)

This product does not contain any hazardous air pollutants (HAP), as defined by

the U.S. Clean Air Act Section 12 (40 CFR 61).

US State Regulations

Pennsylvania Right To Know : C12-C14 Isoalkanes - 0068551-19-9 New Jersey Right To Know : C12-C14 Isoalkanes - 0068551-19-9

California Prop. 65 Ingredients : This product does not contain any chemicals known to the State of California to

cause cancer, birth, or any other reproductive defects.

Notification status

Europe REACH : This mixture contains only ingredients which have been subject to a pre-

registration according to Regulation (EU) No. 1907/2006 (REACH).

United States of America TSCA : On TSCA Inventory

Canada DSL : All components of this product are on the Canadian DSL.

Australia AICS : On the inventory, or in compliance with the inventory

New Zealand NZIoC : This substance may be used as a component in a product covered by a group

standard but it is not approved for use as a chemical in its own right

Japan ENCS : On the inventory, or in compliance with the inventory Korea KECI : On the inventory, or in compliance with the inventory

Philippines PICCS : Not in compliance with the inventory

China IECSC : On the inventory, or in compliance with the inventory



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SECTION 16: Other Information

NFPA Classification : Health Hazard: 1, Fire Hazard: 1, Reactivity Hazard: 0

Further information

Legacy SDS Number : 47800



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Key or le	gend to abbreviations and acronyms used in the safety data	sheet	
ACGIH	American Conference of Government Industrial Hygienists	LD50	Lethal Dose 50%
AICS	Australia, Inventory of Chemical Substances	LOAEL	Lowest Observed Adverse Effect Level
DSL	Canada, Domestic Substances List	NFPA	National Fire Protection Agency
NDSL	Canada, Non-Domestic Substances List	NIOSH	National Institute for Occupational Safety & Health
CNS	Central Nervous System	NTP	National Toxicology Program
CAS	Chemical Abstract Service	NZIoC	New Zealand Inventory of Chemicals
EC50	Effective Concentration	NOAEL	No Observable Adverse Effect Level
EC50	Effective Concentration 50%	NOEC	No Observed Effect Concentration
EGEST	EOSCA Generic Exposure Scenario Tool	OSHA	Occupational Safety & Health Administration
EOSCA	European Oilfield Specialty Chemicals Association	PEL	Permissible Exposure Limit
EINECS	European Inventory of Existing Chemical Substances	PICCS	Philippines Inventory of Commercial Chemical
			Substances
MAK	Germany Maximum Concentration Values	PRNT	Presumed Not Toxic
GHS	Globally Harmonized System	RCRA	Resource Conservation Recovery Act
>=	Greater Than or Equal To	STEL	Short-term Exposure Limit
IC50	Inhibition Concentration 50%	SARA	Superfund Amendments and Reauthorization Act
IARC	International Agency for Research on Cancer	TLV	Threshold Limit Value
IECSC	Inventory of Existing Chemical	TWA	Time Weighted Average
ENCS	Japan, Inventory of Existing and New Chemical Substances	TSCA	Toxic Substance Control Act
KECI	Korea, Existing Chemical Inventory	UVCB	Unknown or Variable Composition, Complex
			Reaction Products, and Biological Materials
<=	Less Than or Equal To	WHMIS	Workplace Hazardous Materials Information System
LC50	Lethal Concentration 50%		

Disclaimer

The information provided in this Material Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text. As data and or regulations change, and conditions of use and handling are beyond control, no warranty, expressed or implied is made. Personnel handling this material must make independent determinations of the suitability and completeness of information to assure proper use and disposal of this material and the safety and health of employees and customers. The buyer assumes all responsibility of using and handling the product in accordance with applicable Federal, State and Local regulations. The user should consider the health hazards and safety information herein as a guide and should take necessary steps to train employees and to develop work practice procedures to ensure a safe work environment.

End of Safety Data Sheet



Safety Data Sheet

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

1.1. Identification

Product name : GCR-14A, GCR-14A-BULK Crack Detection Powder

Other Means of Identification : MI-GLOW® 800

1.3. Recommended Use of The Chemical and Restrictions on Use

Recommended Use : Non-destruction testing.

Recommended Restrictions : None known.

1.3. Details of the supplier of the safety data sheet

Distributor : Goodson Manufacturing Company

156 Galewski Drive

Winona, MN 55987-0847 - USA

T 507-452-1830

1.4. Emergency telephone number

Emergency number : 800-924-6804 (24 hours)

SECTION 2: Hazard(s) Identification

2.1. Classification of the Substance or Mixture

Physical Hazards : Not classified.
Health Hazards : Not classified
OSHA Defined Hazards : Combustible dusts.

2.2. Label elements

GHS-US labeling

Hazard pictograms (GHS-US) : None
Signal word (GHS-US) : Warning

Hazard statements (GHS-US) : May form combustible dust concentrations in air.

Precautionary statements (GHS-US)

Prevention : Keep away from heat/sparks/open flames/hot surfaces. No smoking. Keep

container tightly closed. Ground/bond container and receiving equipment. Prevent

dust accumulation to minimize explosion hazard.

Response : Remove and wash contaminated clothing before re-use. In case of fire use

appropriate media for extinction.

Storage : Store away from incompatible materials.

Disposal : Dispose of waste and residues in accordance with local authority requirements.

2.3 Additional Information

Hazards Not Otherwise Classified : Not classified Supplemental Information : Not applicable

SECTION 3: Composition/information on ingredients

3.1. Mixtures

O. I. WINCHES			
Chemical Name	CAS Number	%	
Iron Oxide	0001317-61-9	> 50%	
Other Components Below Reportable Levels		50%	_



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SECTION 4: First Aid Measures

Inhalation : Move to fresh air. Call a physician if symptoms develop or persist.

Skin Contact : Wash off with soap and water. Get medical attention if irritation develops and

persists.

Eye Contact : Do not rub eyes. Rinse with water. Get medical attention if irritation develops and

persists.

Ingestion : Rinse mouth. Get medical attention if symptoms occur.

Most Important Symptoms/Effects,

Acute and Delayed

Dust may cause eye, skin and respiratory tract irritation

Indication of Immediate Medical Attention & Special Treatment Needed Provide general supportive measures and treat symptomatically

General Information : Ensure that medical personnel are aware of the material(s) involved and take

precautions to protect themselves

SECTION 5: Fire-Fighting Measures

5.1. Extinguishing Media

Suitable Extinguishing Media : Water fog. Foam. Dry chemical powder. Carbon dioxide (CO2). Apply

extinguishing media carefully to avoid creating airborne dust.

Unsuitable Extinguishing Media : Do not use water jet as an extinguisher as this will spread fire.

5.2. Special Hazards Arising From the Chemical

Explosion Hazard : Avoid generating dust; fine dust dispersed in air in sufficient concentrations and in

the presence of an ignition source is a potential dust explosion hazard.

5.3. Advice for firefighters

Protective Equipment : Self-contained breathing apparatus and full protective clothing must be worn in

case of fire.

Firefighting Equipment/Instructions : In case of fire and/or explosion do not breathe fumes. Move containers from fire

area if you can do so without risk. Use water spray to cool unopened containers.

SECTION 6: Accidental Release Measures

6.1. Personal Precautions, Protective Equipment and Emergency Procedures

Precautions : Keep unnecessary personnel away. Dust deposits should not be allowed to

accumulate on surfaces as these may form an explosive mixture if they are released into the air in sufficient concentration. Use only non-sparking tools. Wear appropriate personal protective equipment. Ensure adequate ventilation. Local authorities should be advised if significant spills cannot be contained.

6.2. Environmental Precautions

Precautions : Avoid discharge into drains, water sources or onto the ground.

6.3. Methods and Material for Containment and Cleaning up

Methods for cleaning up : ELIMINATE all ignition sources (no smoking, flares, sparks or flames in

immediate area). Avoid dispersal of dust in the air (i.e. clearing dust surfaces with

compressed air).

Large Spills: Sweep or shovel up material and place in a clearly labeled container

for waste. Following product recovery, flush area with water.

Small Spills: Collect dust using a vacuum cleaner equipped with a HEPA filter. Never return spills to original containers for re-use. For waste disposal, see

Section 13 of this SDS.



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SECTION 7: Handling and Storage

Precautions for safe handling : Minimize dust generation and accumulation. Routine housekeeping should be

> instituted to ensure that dusts do not accumulate on surfaces. Dry powders can build up static electricity charges when subjected to the friction of transfer and mixing operations. Provide adequate precautions, such as electrical grounding and bonding, or inert atmospheres. Explosion-proof exhaust ventilation is recommended. Wear appropriate personal protection equipment. Observe good

industrial hygiene practices. Avoid prolonged exposure.

Keep containers tightly closed in a dry, cool and well-ventilated location. Store Storage conditions

away from incompatible materials (see Section 10 of this SDS). Keep away from

heat, sparks and open flames.

SECTION 8: Exposure controls/personal protection

: No exposure limits noted for ingredient(s). Occupational Exposure Limits

No biological exposure limits noted for ingredient(s). Biological Limit Values

Exposure Guidelines No exposure standards allocated.

Appropriate Engineering Controls Explosion-proof general and local exhaust ventilation. Good general ventilation

(typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not be established,

maintain airborne levels to an acceptable level.

Eve/Face Protection Wear goggles or safety glasses with side shields.

Hand Protection For prolonged or repeated skin contact, use suitable protective gloves.

Wear suitable protective clothing. Other Skin Protection

Respiratory Protection If engineering controls do not maintain airborne concentrations below

> recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not be established), an approved respirator

must be worn.

Thermal Hazards Wear appropriate thermal protective clothing, when necessary.

General Hygiene Considerations Do not eat, drink or smoke when using. Always observe good hygiene measures

such as washing after handling the material and before eating, drinking or smoking. Routinely wash work clothing and protective equipment to remove

contaminants.

SECTION 9: Physical and Chemical Properties

9.1. Information on Basic Physical and Chemical Properties

Physical state : Solid Form Powder Color Dark Green Odor Odorless Odor threshold Not available рН Not available Melting point Not available Freezing point Not available Boiling point/Boiling Range Not available Flash point Not applicable Evaporation rate Not applicable Flammability (solid, gas) Not available



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Upper/Lower Flammability Limits

Flammability Limit - lower (%) : Not applicable
Flammability Limit - upper (%) : Not applicable
Explosive Limit - lower (%) : Not applicable
Explosive Limit - upper (%) : Not applicable
Vapor Pressure : Not applicable
Vapor Density : Not applicable

Relative Density 0.56 Relative Density Temperature 68°F (20°C) Solubility Insoluble Partition Coefficient; n-octanol/water Not applicable Auto-ignition temperature Not applicable Decomposition temperature Not applicable Viscosity Not applicable VOC (Weight %) Not applicable

SECTION 10: Stability and reactivity

Reactivity : This product is stable and non-reactive under normal conditions of use, storage

and transport.

Chemical Stability : Material is stable under normal conditions.

Possibility of Hazardous Reactions : No dangerous reactions known under conditions of normal use.

Conditions to Avoid : Keep away from heat, sparks and open flames. Minimize dust generation and

accumulation. Avoid contact with incompatible materials.

Incompatible Materials : Strong oxidizing agents.

Hazardous Decomposition Products : No hazardous decomposition products are known.

SECTION 11: Toxicological Information

11.1. Information on Likely Route of Exposure

Ingestion : Expected to be a low ingestion hazard.

Inhalation : Inhalation of dusts may cause respiratory irritation.

Skin Contact : Dust or powder may irritate the skin.

Eye Contact : Dust may irritate the eyes.

Symptoms Related to Toxicological Effects : Dust may cause eye, skin and respiratory tract irritation.

11.2. Information on Toxicological Effects

Acute toxicity : Expected to be a low hazard for usual industrial or commercial handling by

trained personnel.

Skin Corrosion/Irritation : Prolonged skin contact may cause temporary irritation.
Serious Eye Damage/Irritation : Direct contact with eyes may cause temporary irritation.

Respiratory Sensitization : Not a respiratory sensitizer.

Skin Sensitization : This product is not expected to cause skin sensitization.

Germ Cell Mutagenicity : No data available to indicate product or any components present at greater than

0.1% are mutagenic or genotoxic.

Carcinogenicity : This product is not considered to be a carcinogen by IARC, ACGIH, NTP or OSHA.

Reproductive Toxicity : This product is not expected to cause reproductive or developmental effects.

STOT-single exposure : Not classified.
STOT-repeat exposure : Not classified.
Aspiration hazard : Not classified.

Chronic Effects : Prolonged inhalation may be harmful.



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SECTION 12: Ecological Information

Ecotoxicity : This product is not classified as environmentally hazardous. However, this does

not exclude the possibility that large or frequent spills can have a harmful or

damaging effect on the environment.

Persistence and Degradability : No data available on the degradability of this product.

Bioaccumulative Potential : No data available for this product.

Mobility in Soil : Not available.

Other Adverse Effects : No other adverse environmental effects (e.g. ozone depletion, photochemical

ozone creation potential, endocrine disruption, global warming potential) are

expected from this product.

SECTION 13: Disposal Considerations

Disposal Instructions : Collect and reclaim or dispose of in sealed containers at licensed waste disposal

site. Dispose of contents/containers in accordance with local, regional, national,

international regulations.

Local Disposal Regulations : Dispose of in accordance with all applicable regulations.

Hazardous Waste Code : The waste code should be assigned in discussion between the user, the producer

and the waste disposal company.

Waste From Residues/Unused Product: Dispose of in accordance with all applicable regulations. Empty containers or

liners may retain some product residues. This material and its container must be

disposed of in a safe manner (see disposal instructions).

Contaminated Packaging : Empty containers should be taken to an approved waste handling site for

recycling or disposal. Since emptied containers may retain product residue, follow

label warning even after container is emptied.

SECTION 14: Transport Information

DOT (US) : Not regulated as a hazardous material by DOT.

IMDG : Not regulated as a dangerous good.IATA : Not regulated as a dangerous good.

Bulk Transport : Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code - Not

applicable.

SECTION 15: Regulatory Information

15.1. US Federal Regulations

General Statement : This product is a "Hazardous Chemical" as defined by the OSHA Hazardous

Communication Standard, 29 CFR 1910.1200.

TSCA : Section 12(b) Export Notification (40 CFR 707, Subpt D) - Not Regulated.

US OSHA : OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050) - Not Listed.

CERCLA Hazardous Substance List : (40 CFR 302.4) - Not listed. Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard Categories : Immediate Hazard - No

Delayed Hazard - No Fire Hazard - Yes Pressure Hazard - No Reactivity Hazard - No

SARA 302 Extremely Hazardous Chemical: No. SARA 311/312 Hazardous Chemical: Yes.

SARA 313 (TRI Reporting) : Chemical Name: Formaldehyde, CAS Number: 0000050-00-0, Typical Wt. <0.1%



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Other Federal Regulations

Clean Air Act (CAA) : Section 112 Hazardous Air Pollutants (HAPs) List - Not regulated.

Section 112(r) Accidental Release Prevention (40 CFR 68.130) - Not regulated.

Safe Drinking Water Act (SDWA) : Not regulated. Food and Drug Administration : Not regulated.

15.2. US State Regulations

Massachusetts RTK Substance List

: Not regulated.

New Jersey Worker & Community

Right-to-Know Act

Not regulated.

Pennsylvania RTK Hazardous

Substances : Not regulated. Rhode Island RTK : Not regulated.

California Proposition 65 : WARNING: This product contains a chemical known to the State of California to

cause cancer.

California Proposition 65

Listed Substance : Formaldehyde (CAS 0000050-00-0)

15.3. International Inventories				
Country	Inventory Name	On Inventory (Yes/No)*		
Australia	Australian Inventory of Chemical Substances (AICS)	Yes		
Canada	Domestic Substances List (DSL)	Yes		
	Non-Domestic Substances List (NDSL)	No		
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes		
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes		
	European List of Notified Chemical Substances (ELINCS)	No		
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes		
Korea	Existing Chemical List (ECL)	Yes		
New Zealand	New Zealand Inventory	Yes		
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes		
U.S. & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes		

^{*}A "Yes" indicates this product complies with inventory requirements administered by the governing country(s). A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

Section 16: Other Information

Issue Date : October 29, 2013
Revision Date : January 22, 2016

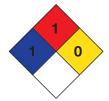
Version : 2

Further Information : Refer to NFPA 654, Standard for the Prevention of Fire and Dust Explosions from

the Manufacturing, Processing and Handling of Combustible Solids, for safe

handling.

NFPA Ratings



List of Abbreviations : STOT : Single Target Organ Toxicity

TWA: Time Weighted Average



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End of Safety Data Sheet