

Safety Data Sheet

Triethanolamine 85% LF

Version 1.0

Date: 04/15/2015

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product name : Triethanolamine 85% LF
Product Use Description : Intermediate, Cleaning solutions.

Manufacturer or supplier's details

Company : Deep South Chemical, Inc.
Address : 229 Millstone Road
Broussard, LA 70518
United States of America

Emergency telephone number:

Transport North America: CHEMTREC 800.424.9300

Additional Information: : Responsible Party: Product Safety Group
E-Mail: info@deep-south-chemical.com
SDS Requests: 1-337-837-9931
Website: www.deep-south-chemical.com

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification

Skin irritation : Category 2
Serious eye damage : Category 1
Carcinogenicity : Category 2
Specific target organ toxicity - repeated exposure (Oral) : Category 2 (Liver, Blood, Kidney)

GHS Label element

Hazard pictograms :



Signal word : Danger

Hazard statements : H315 Causes skin irritation.
H318 Causes serious eye damage.
H351 Suspected of causing cancer.

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H373 May cause damage to organs through prolonged or repeated exposure if swallowed.

Precautionary statements : **Prevention:**
P201 Obtain special instructions before use.
P260 Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.
P264 Wash skin thoroughly after handling.
P280 Wear eye protection/ face protection.
P280 Wear protective gloves.
P281 Use personal protective equipment as required.
Response:
P302 + P352 IF ON SKIN: Wash with plenty of soap and water.
P305 + P351 + P338 + P310 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/ physician.
P308 + P313 IF exposed or concerned: Get medical advice/ attention.
P332 + P313 If skin irritation occurs: Get medical advice/ attention.
Storage:
P405 Store locked up.
Disposal:
P501 Dispose of contents/ container to an approved waste disposal plant.

Potential Health Effects

Aggravated Medical Condition : None known.

Symptoms of Overexposure : Severe irritation

Carcinogenicity:

IARC

Group 2B: Possibly carcinogenic to humans

111-42-2

Diethanolamine

ACGIH

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

OSHA

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

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

Emergency Overview

Appearance	viscous, liquid
Colour	colourless, light yellow
Odour	ammoniacal
Hazard Summary	No information available.

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

CAS-No.	Chemical Name	Concentration (%)
102-71-6	Triethanolamine	70 - 100
111-42-2	Diethanolamine	1 - 20

SECTION 4. FIRST AID MEASURES

- General advice : Consult a physician.
Show this safety data sheet to the doctor in attendance.
Do not leave the victim unattended.
- If inhaled : If unconscious place in recovery position and seek medical advice.
If symptoms persist, call a physician.
- In case of skin contact : If skin irritation persists, call a physician.
If on skin, rinse well with water.
If on clothes, remove clothes.
- In case of eye contact : Small amounts splashed into eyes can cause irreversible tissue damage and blindness.
In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
Continue rinsing eyes during transport to hospital.
Keep eye wide open while rinsing.
If eye irritation persists, consult a specialist.
- If swallowed : Clean mouth with water and drink afterwards plenty of water.

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	Keep respiratory tract clear. Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Take victim immediately to hospital.
Most important symptoms and effects, both acute and delayed	: Severe irritation
Notes to physician	: Treat symptomatically

SECTION 5. FIREFIGHTING MEASURES

Suitable extinguishing media	: Use an extinguishing media appropriate for surrounding fire.
Unsuitable extinguishing media	: High volume water jet
Specific hazards during firefighting	: Do not allow run-off from fire fighting to enter drains or water courses. During a fire, irritating or toxic decomposition products may be generated.
Hazardous combustion products	: Carbon dioxide (CO ₂) Carbon monoxide Nitrogen oxides (NO _x)
Specific extinguishing methods	: Collect contaminated fire extinguishing water separately. This must not be discharged into drains.
Further information	: Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.
Special protective equipment for firefighters	: Wear self-contained breathing apparatus for firefighting if necessary.

NFPA Flammable and Combustible Liquids Classification:
Combustible Liquid Class IIIB

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and	: Use personal protective equipment.
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emergency procedures

Environmental precautions : Prevent product from entering drains.
Prevent further leakage or spillage if safe to do so.
If the product contaminates rivers and lakes or drains inform respective authorities.

Methods and materials for containment and cleaning up : Neutralise with acid.
Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).
Keep in suitable, closed containers for disposal.

SECTION 7. HANDLING AND STORAGE

Advice on safe handling : Do not breathe vapours/dust.
Avoid contact with skin and eyes.
For personal protection see section 8.
Smoking, eating and drinking should be prohibited in the application area.
To avoid spills during handling keep bottle on a metal tray.
Dispose of rinse water in accordance with local and national regulations.

Conditions for safe storage : Keep container tightly closed in a dry and well-ventilated place.
Electrical installations / working materials must comply with the technological safety standards.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

CAS-No.	Components	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
102-71-6	Triethanolamine	TWA	5 mg/m ³	ACGIH
111-42-2	Diethanolamine	TWA (Inhalable fraction and vapor)	1 mg/m ³	ACGIH
		TWA	3 ppm 15 mg/m ³	NIOSH REL
		TWA	3 ppm 15 mg/m ³	OSHA P0

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Personal protective equipment

Respiratory protection	: No personal respiratory protective equipment normally required.
Hand protection Remarks	: The suitability for a specific workplace should be discussed with the producers of the protective gloves.
Eye protection	: Eye wash bottle with pure water Tightly fitting safety goggles Wear face-shield and protective suit for abnormal processing problems.
Skin and body protection	: impervious clothing Choose body protection according to the amount and concentration of the dangerous substance at the work place.
Hygiene measures	: When using do not eat or drink. When using do not smoke. Wash hands before breaks and at the end of workday.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	: viscous, liquid
Colour	: colourless, light yellow
Odour	: ammoniacal
Odour Threshold	: No data available
pH	: 11 - 11.7 @ 2 % 15.8 - 20 °C (60.4 - 68 °F)
Freezing Point (Melting point/freezing point)	: -5 - 21 °C (23 - 70 °F) (1,013 hPa)
Boiling Point (Boiling point/boiling range)	: 119.1 - 336.1 °C (246.4 - 637.0 °F) (1013 hPa)
Flash point	: 138 - 194.4 °C (280 - 381.9 °F) (1,013 hPa)
Evaporation rate	: < 0.1 n-Butyl Acetate
Flammability (solid, gas)	: No data available

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Burning rate	: No data available
Upper explosion limit	: 7.2 %(V)
Lower explosion limit	: 3.6 %(V)
Vapour pressure	: 0.0002 - 9.7 mmHg @ 20 - 21 °C (68 - 70 °F)
Relative vapour density	: 5.1
Relative density	: 1.119 - 1.125 @ 20 °C (68 °F) Reference substance: (water = 1)
Density	: 1.125 g/cm ³ @ 20 °C (68 °F)
Bulk density	: No data available
Solubility(ies)	
Water solubility	: 1,000 g/l completely miscible
Solubility in other sol- vents	: No data available
Partition coefficient: n- octanol/water	: log Pow: -2.3
Auto-ignition temperature	: 324 - 330 °C
Thermal decomposition	: > 120 °C
Viscosity	
Viscosity, dynamic	: 934 mPa.s @ 20 °C (68 °F)
Viscosity, kinematic	: 182 mm ² /s @ 40 °C (104 °F)
Explosive properties	: Not explosive
Oxidizing properties	: The substance or mixture is not classified as oxidizing.

SECTION 10. STABILITY AND REACTIVITY

Reactivity	: No dangerous reaction known under conditions of normal use.
Chemical stability	: Stable under normal conditions.

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Possibility of hazardous reactions	: No hazards to be specially mentioned.
Conditions to avoid	: Freezing temperatures. elevated temperatures Possible emission of gaseous decomposition products may lead to a dangerous pressure build-up. Exposure to moisture. Exposure to light.
Incompatible materials	: Strong acids Strong oxidizing agents Halogenated compounds Aluminium Halogenated hydrocarbon Zinc galvanized metals nitrites and other nitrosating agents Copper Tin Strong bases Acids Oxidizing agents
Hazardous decomposition products	: Hydrogen, by reaction with metals carbon dioxide and carbon monoxide Nitrogen oxides (NOx) Ammonia Thermal decomposition can lead to release of irritating gases and vapours.

SECTION 11. TOXICOLOGICAL INFORMATION

Acute toxicity

Product:

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

Components:

102-71-6:

Acute oral toxicity : LD50 (rat, male and female): 6,400 mg/kg
Method: OECD Test Guideline 401
GLP: no

Acute inhalation toxicity : Remarks: No data available

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Acute dermal toxicity : LD50 (rabbit): > 2,000 mg/kg
Method: OECD Test Guideline 402
GLP: no

111-42-2:
Acute oral toxicity : LD50 (rat): 780 mg/kg
Assessment: The component/mixture is moderately toxic after single ingestion.

Acute inhalation toxicity : Remarks: No data available

Acute dermal toxicity : LD50 (rabbit): > 5,000 mg/kg
Assessment: The substance or mixture has no acute dermal toxicity

Skin corrosion/irritation

Product:

Remarks: Irritating to skin.

Components:

102-71-6:
Species: rabbit
Method: OECD Test Guideline 404
Result: Irritating to skin.
GLP: no

111-42-2:
Species: rabbit
Result: Irritating to skin.

Serious eye damage/eye irritation

Product:

Remarks: Risk of serious damage to eyes.

Components:

102-71-6:
Species: rabbit
Result: Irritating to eyes.
Method: OECD Test Guideline 405

111-42-2:
Species: rabbit
Result: Risk of serious damage to eyes.

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Respiratory or skin sensitisation**Components:****102-71-6:**

Test Type: Maximization test

Species: guinea pig

Method: OECD Test Guideline 406

Result: Did not cause sensitisation on laboratory animals.

GLP: yes

111-42-2:

Test Type: Maximisation Test (GPMT)

Species: guinea pig

Result: Did not cause sensitisation on laboratory animals.

Germ cell mutagenicity**Components:****102-71-6:**

Genotoxicity in vitro : Test Type: Ames test
Test species: Salmonella typhimurium
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 471
Result: negative
GLP: No data available

Germ cell mutagenicity-Assessment : Tests on bacterial or mammalian cell cultures did not show mutagenic effects.

111-42-2:

Genotoxicity in vitro : Test Type: Mammalian cell gene mutation assay
Test species: Mouse lymphoma cells
Metabolic activation: with and without metabolic activation
Result: negative

Genotoxicity in vivo : Test Type: In vivo micronucleus test
Test species: mouse
Application Route: Dermal
Exposure time: 13 wks
Result: negative

Germ cell mutagenicity-Assessment : Tests on bacterial or mammalian cell cultures did not show mutagenic effects.

Carcinogenicity**Components:****102-71-6:**

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Carcinogenicity - Assessment : Carcinogenicity classification not possible from current data.

111-42-2:

Species: rat
Application Route: Dermal
Exposure time: 103 wks
Frequency of Treatment: 5 days/week
NOAEL: 64 mg/kg body weight

Method: OECD Test Guideline 451

Carcinogenicity - Assessment : Carcinogenicity classification not possible from current data.

Reproductive toxicity**Components:****102-71-6:**

Effects on fertility : Species: rat, male and female
Application Route: oral
Dose: 100, 300, 1000 mg/kg bw/day
General Toxicity - Parent: NOAEL: > 1,000 mg/kg bw
Fertility: NOAEL: > 1,000 mg/kg
Early Embryonic Development: NOAEL: 300 mg/kg
Symptoms: reduced litter size
Method: OECD Test Guideline 421
GLP: yes

Effects on foetal development : Species: rat
Application Route: oral
Dose: 100, 300, 1000 mg/kg bw/day
General Toxicity Maternal: NOAEL: > 1,000 mg/kg bw
Developmental Toxicity: NOAEL: 300 mg/kg bw
GLP: yes

Reproductive toxicity - Assessment : No evidence of adverse effects on sexual function and fertility, and on development, based on animal experiments.

111-42-2:

Effects on fertility : Test Type: Two-generation study
Species: rat
Application Route: Oral
Fertility: NOAEL: 300 mg/kg body weight
Symptoms: Reduced fertility
Remarks: Information given is based on data obtained from similar substances.

Effects on foetal development : Species: rat

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opment

Application Route: Inhalation
 Duration of Single Treatment: 10 d
 Frequency of Treatment: 6 hr/day
 Teratogenicity: NOAEC: 0.2 mg/L

Reproductive toxicity -
 Assessment

: Fertility classification not possible from current data.
 Embryotoxicity classification not possible from current data.

STOT - single exposure

Product:No data available

Components:

102-71-6:No data available

111-42-2:No data available

STOT - repeated exposure

Product:No data available

Components:

102-71-6:No data available

111-42-2:

Exposure routes:	Target Organs:	Assessment:	Remarks:
Oral	Liver, Blood, Kid- ney	The substance or mixture is classified as specific target organ toxicant, repeated exposure, category 2., May cause damage to organs through prolonged or repeated exposure.	

Repeated dose toxicity

Components:

102-71-6:

Species: rat, male and female
 NOAEL: 1,000 mg/kg
 Application Route: Oral
 Exposure time: 91 d
 Number of exposures: daily
 Dose: 0; 250; 500; 1000 mg/kg bw
 Method: OECD Test Guideline 408

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GLP: no

Species: rat, male and female

NOAEL: 0.5 mg/l

Application Route: Inhalation

Exposure time: 28 d

Number of exposures: 6 h/d, 5 d/wk

Dose: 0.02; 0.1; 0.5 mg/l

Method: OECD Test Guideline 412

GLP: yes

Symptoms: Local irritation

Species: rat, male and female

NOAEL: 125 mg/kg

Application Route: Dermal

Exposure time: 90 d

Number of exposures: 5 d/wk

Dose: 125; 250; 500; 1000; 2000 mg/k

Method: OECD Test Guideline 411

GLP: No data available

Symptoms: Local irritation

111-42-2:

Species: rat

LOAEL: 320

Application Route: Oral

Exposure time: 13 wks

Number of exposures: daily

Symptoms: Blood disorders

Aspiration toxicity

Product:

No aspiration toxicity classification

Components:

102-71-6:

No aspiration toxicity classification

111-42-2:

No aspiration toxicity classification

Further information

Product:

Remarks: No data available

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SECTION 12. ECOLOGICAL INFORMATION**Ecotoxicity****Components:****102-71-6:**

Toxicity to fish : LC50 (Pimephales promelas (fathead minnow)): > 100 mg/l
Exposure time: 96 h
Test Type: flow-through test

Toxicity to daphnia and other aquatic invertebrates : EC50 (Ceriodaphnia dubia): > 100 mg/l
Exposure time: 48 h
Test Type: static test

Toxicity to algae : EC50 (Desmodesmus subspicatus): > 100 mg/l
End point: Growth rate
Exposure time: 72 h
Test Type: static test

Toxicity to bacteria : EC 50 (activated sludge): 1,000 mg/l
Exposure time: 3 h
Method: OECD Test Guideline 209

111-42-2:

Toxicity to fish : LC50 (Pimephales promelas (fathead minnow)): > 100 mg/l
Exposure time: 96 h
Test Type: static test

Toxicity to daphnia and other aquatic invertebrates : EC50 (Ceriodaphnia dubia): 30.1 mg/l
Exposure time: 48 h
Test Type: static test

Toxicity to algae : EC50 (Pseudokirchneriella subcapitata (Selenastrum capricornutum)): 2.2 mg/l
End point: Growth rate
Exposure time: 96 h
Test Type: static test

Toxicity to bacteria : EC20 (activated sludge): 1,000 mg/l
End point: Respiratory rate
Exposure time: 30 min
Test Type: Static
Method: OECD Test Guideline 209

Ecotoxicology Assessment

Acute aquatic toxicity : Toxic to aquatic life.

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Chronic aquatic toxicity : Toxic to aquatic life with long lasting effects.

Persistence and degradability**Product:**Biodegradability : Biodegradation: 97 %
Exposure time: 28 d
Remarks: Readily biodegradable, according to appropriate OECD test.**Components:****102-71-6:**Biodegradability : Result: Readily biodegradable.
Biodegradation: 97 %
Exposure time: 28 d
Method: OECD Test Guideline 301A

Theoretical Oxygen Demand (ThOD) : 0.00204 mg/g

111-42-2:Biodegradability : aerobic
Inoculum: activated sludge
Biodegradation: 93 %
Exposure time: 28 d**Bioaccumulative potential****Product:**Bioaccumulation : Bioconcentration factor (BCF): < 3.9
Remarks: The substance has low potential for bioaccumulation.**Components:****102-71-6:**Bioaccumulation : Species: Cyprinus carpio (Carp)
Bioconcentration factor (BCF): 3.9

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

111-42-2:

Partition coefficient: n-octanol/water : log Pow: -2.18

Mobility in soil

No data available

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Other adverse effects

No data available

Product:

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

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

Additional ecological information : No data available

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues : Dispose of in accordance with all applicable local, state and federal regulations.
For assistance with your waste management needs - including disposal, recycling and waste stream reduction, contact Deep South Chemical, Inc at 337-837-9931.

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

SECTION 14. TRANSPORT INFORMATION

IATA (International Air Transport Association): UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S., (TRIETHANOLAMINE, DIETHANOLAMINE) , 9, III, Flash Point:138 - 194.4 °C(280 - 381.9 °F)

IMDG (International Maritime Dangerous Goods): UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S., (TRIETHANOLAMINE, DIETHANOLAMINE), 9, III

DOT (Department of Transportation): UN3082, Environmentally hazardous substances, liquid, n.o.s., (TRIETHANOLAMINE, DIETHANOLAMINE), 9, III

Special Notes: : Class 9, Packing Group III when material is shipped in quantities in one package at or above the Reportable

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Quantity and when no other hazard class applies; otherwise, not regulated.

SECTION 15. REGULATORY INFORMATION

OSHA Hazards : Carcinogen, Harmful by ingestion., Moderate skin irritant, Severe eye irritant

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

CERCLA Reportable Quantity

Components	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
Diethanolamine	111-42-2	100	667

SARA 304 Extremely Hazardous Substances Reportable Quantity

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

SARA 311/312 Hazards : Chronic Health Hazard
Acute Health Hazard

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

SARA 313 : The following components are subject to reporting levels established by SARA Title III, Section 313:

111-42-2 Diethanolamine

Clean Air Act

The following chemical(s) are listed as HAP under the U.S. Clean Air Act, Section 12 (40 CFR 61):

111-42-2 Diethanolamine %

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F).

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 111 SOCOMI Intermediate or Final VOC's (40 CFR 60.489).

Clean Water Act

This product does not contain any Hazardous Substances listed under the U.S. CleanWater Act, Section 311, Table 116.4A.

This product does not contain any Hazardous Chemicals listed under the U.S. Clean-Water Act, Section 311, Table 117.3.

This product does not contain any toxic pollutants listed under the U.S. Clean Water Act Section 307

US State Regulations

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Massachusetts Right To Know

102-71-6	Triethanolamine	70 - 100 %
111-42-2	Diethanolamine	1 - 20 %

Pennsylvania Right To Know

102-71-6	Triethanolamine	70 - 100 %
7732-18-5	Water	1 - 20 %
111-42-2	Diethanolamine	1 - 20 %

New Jersey Right To Know

102-71-6	Triethanolamine	70 - 100 %
7732-18-5	Water	1 - 20 %
111-42-2	Diethanolamine	1 - 20 %

California Prop 65

	WARNING! This product contains a chemical known to the State of California to cause cancer.	
111-42-2	Diethanolamine	

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

Switzerland. New notified substances and declared preparations	:	y (positive listing) (The formulation contains substances listed on the Swiss Inventory)
United States TSCA Inventory	:	y (positive listing) (On TSCA Inventory)
Canadian Domestic Substances List (DSL)	:	y (positive listing) (All components of this product are on the Canadian DSL.)
Australia Inventory of Chemical Substances (AICS)	:	y (positive listing) (On the inventory, or in compliance with the inventory)
New Zealand. Inventory of Chemical Substances	:	y (positive listing) (On the inventory, or in compliance with the inventory)
Japan. ENCS - Existing and New Chemical Substances Inventory	:	y (positive listing) (On the inventory, or in compliance with the inventory)

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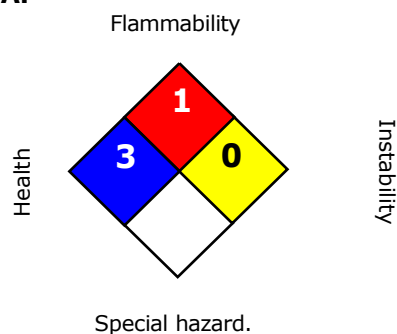
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Japan. ISHL - Inventory of Chemical Substances (METI)	:	y (positive listing) (On the inventory, or in compliance with the inventory)
Korea. Korean Existing Chemicals Inventory (KECI)	:	y (positive listing) (On the inventory, or in compliance with the inventory)
Philippines Inventory of Chemicals and Chemical Substances (PICCS)	:	y (positive listing) (On the inventory, or in compliance with the inventory)
China. Inventory of Existing Chemical Substances in China (IECSC)	:	y (positive listing) (On the inventory, or in compliance with the inventory)

SECTION 16. OTHER INFORMATION

Further information

NFPA:



HMIS III:

HEALTH	3*
FLAMMABILITY	1
PHYSICAL HAZARD	0

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

The information accumulated is based on the data of which we are aware and is believed to be correct as of the date hereof. Since this information may be applied under conditions beyond our control and with which we may be unfamiliar and since data made become available subsequently to the date hereof, we do not assume any responsibility for the results of its use. Recipients are advised to confirm in advance of need that the information is current, applicable, and suitable.

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ble to their circumstances. This MSDS has been prepared by Deep South Chemical, Inc. EHS Product Safety Department (1-337-837-9931) info@deep-south-chemical.com

Material number:

16056724, 16056723, 16027676, 16024615, 770825, 601588, 596459, 593346, 568349, 89051, 72067, 54586, 88015

Key or legend 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 Substances in China	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%