

## SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

**Product name** : IPA/ IPA5/ IPA55  
**Product Use Description**  
: Isopropanol Anti-Freeze

### Supplier Details

Manufacturer Name	The Berkebile Oil Company
Address	1216 Red Brant Road Somerset, PA 15501
Phone	814-443-1656
Email	info@berkebileoil.com
Fax	814-443-2873
Chemtrec Emergency Tel #	800-424-9300

## SECTION 2. HAZARDS IDENTIFICATION

### GHS Classification

Flammable liquids : Category 2  
Eye irritation : Category 2A  
Specific target organ toxicity - single exposure  
: Category 3 (Central nervous system)

### GHS Label element



Hazard pictograms :  
Signal word : Danger  
Hazard statements : H225 Highly flammable liquid and vapor  
H319 Causes serious eye irritation.  
H336 May cause drowsiness or dizziness.  
Precautionary statements : **Prevention:**

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.  
 P233 Keep container tightly closed.  
 P261 Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray.  
 P264 Wash skin thoroughly after handling.  
 P271 Use only outdoors or in a well-ventilated area.  
 P280 Wear protective gloves/ eye protection/ face protection.

### Potential Health Effects

#### Carcinogenicity:

##### IARC

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

##### ACGIH

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

##### OSHA

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

##### NTP

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

### Emergency Overview

<b>WARNING!</b>	
Appearance	liquid
Colour	colourless, clear
Odour	alcohol-like

### SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

#### Hazardous components

CAS-No.	Chemical Name	Concentration (%)		
67-63-0	Isopropyl alcohol	90	-	100
64-17-5	Ethanol	0.1	-	1

#### Synonyms

: Isopropanol Anhydrous/Isopropyl Alcohol ACS  
 Grade/Velvasol 425/Value Grade Isopropa- nol/  
 Isopropyl Alcohol

#### **SECTION 4. FIRST AID MEASURES**

- General advice : Move out of dangerous area.  
Show this safety data sheet to the doctor in attendance.  
Do not leave the victim unattended.
- If inhaled : Consult a physician after significant exposure.  
If unconscious place in recovery position and seek medical advice.
- In case of skin contact : If on skin, rinse well with water.  
If on clothes, remove clothes.
- In case of eye contact : Immediately flush eye(s) with plenty of water.  
Keep eye wide open while rinsing.  
If eye irritation persists, consult a specialist.
- If swallowed : Keep respiratory tract clear.  
Never give anything by mouth to an unconscious person.  
If symptoms persist, call a physician.

#### **SECTION 5. FIREFIGHTING MEASURES**

- Suitable extinguishing media  
: Alcohol-resistant foam Carbon dioxide (CO<sub>2</sub>) Dry chemical
- 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.  
No hazardous combustion products are known
- Hazardous combustion products  
: No hazardous combustion products are known
- Specific extinguishing methods  
: Use a water spray to cool fully closed containers.
- Further information : Collect contaminated fire extinguishing water separately. This must not be discharged into drains.  
  
Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

For safety reasons in case of fire, cans should be stored separately in closed containments.

Special protective equipment for firefighters

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

#### **NFPA Flammable and Combustible Liquids Classification:**

Flammable Liquid Class IB

### **SECTION 6. ACCIDENTAL RELEASE MEASURES**

Personal precautions, protective equipment and emergency procedures

: Use personal protective equipment.

Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas.

Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.

Environmental precautions

: Prevent product from entering drains.

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

Methods and materials for containment and cleaning up

: Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13).

### **SECTION 7. HANDLING AND STORAGE**

Advice on safe handling

: Avoid formation of aerosol.

Do not breathe vapors/dust.

Avoid exposure - obtain special instructions before use.

Avoid contact with skin and eyes.

For personal protection see section 8.

Smoking, eating and drinking should be prohibited in the application area.

Take precautionary measures against static discharges.

Provide sufficient air exchange and/or exhaust in work rooms.

Open drum carefully as content may be under pressure.

Dispose of rinse water in accordance with local and national regulations.

Conditions for safe storage

- : No smoking.
- Keep container tightly closed in a dry and well- ventilated place.
- Containers which are opened must be carefully re- sealed and kept upright to prevent leakage.
- Observe label precautions.
- 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
67-63-0	Isopropyl alcohol	TWA	200 ppm	ACGIH
		STEL	400 ppm	ACGIH
		TWA	400 ppm 980 mg/m <sup>3</sup>	NIOSH REL
		ST	500 ppm 1,225 mg/m <sup>3</sup>	NIOSH REL
		TWA	400 ppm 980 mg/m <sup>3</sup>	OSHA Z-1
		TWA	400 ppm 980 mg/m <sup>3</sup>	OSHA PO
		STEL	500 ppm 1,225 mg/m <sup>3</sup>	OSHA PO

**Biological occupational exposure limits**

Components	CAS-No.	Control parameters	Biological specimen	Sampling time	Permissible concentration	Basis
Isopropyl alcohol	67-63-0	Acetone	In urine	End of shift at end of work-week	40 mg/l	ACGIH BEI

**Personal protective equipment**

Respiratory protection : No personal respiratory protective equipment normally required.  
In the case of vapour formation use a respirator with an approved filter.

Hand protection  
Remarks : The suitability for a specific workplace should be dis-

cussed 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 : liquid
- Colour : colourless, clear
- Odour : alcohol-like
- Odour Threshold : 200 ppm
- pH : No data available
- Freezing Point (Melting point/freezing point)  
: -88 °C (-126 °F)
- Boiling Point (Boiling point/boiling range)  
: 82 °C (180 °F)
- Flash point : 12 °C (54 °F)
- Evaporation rate : 1.2  
n-Butyl Acetate
- Flammability (solid, gas) : No data available
- Burning rate : No data available
- Upper explosion limit : 12.7 %(V)
- Lower explosion limit : 2 %(V)

Vapour pressure : 32 mmHg @ 20 °C (68 °F)  
Relative vapour density : 2 @ 20 °C (68 °F)  
AIR=1  
Relative density : 0.79 @ 20 °C (68 °F)  
Reference substance: (water = 1)  
Density : 0.79 g/cm<sup>3</sup> @ 20 °C (68 °F)  
Bulk density : No data available  
Solubility(ies)  
Water solubility : completely miscible

Solubility in other sol- vents

: No data available

Partition coefficient: n- octanol/water

: log Pow: 0.05 @ 25 °C (77 °F)

Auto-ignition temperature : 399 °C

Thermal decomposition : No data available

Viscosity

Viscosity, dynamic : 2.4 mPa.s @ 20 °C (68 °F)

Viscosity, kinematic : 2.6 mm<sup>2</sup>/s @ 25 °C (77 °F)

## SECTION 10. STABILITY AND REACTIVITY

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

Chemical stability : Stable under normal conditions.

Possibility of hazardous reactions

: Vapours may form explosive mixture with air.

Conditions to avoid : Heat, flames and sparks.

Incompatible materials : Aldehydes

Chlorine  
Ethylene oxide  
halogens

isocyanates  
Strong acids  
strong oxidizing agents

Hazardous decomposition products

: Carbon monoxide, carbon dioxide and unburned hydrocarbons (smoke).

## SECTION 11. TOXICOLOGICAL INFORMATION

### Acute toxicity

#### **Product:**

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

Acute inhalation toxicity : Acute toxicity estimate : > 40 mg/l  
Exposure time: 4 h Test  
atmosphere: vapor  
Method: Calculation method

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

#### **Components:**

##### **67-63-0:**

Acute oral toxicity : LD50 (rat): 5,500 mg/kg  
Symptoms: ataxia, Vomiting, Pain, hypothermia, Co-  
ma, Dizziness

Acute inhalation toxicity : LC50 (rat, male and female): > 10000 ppm  
Exposure time: 6 h Test  
atmosphere: vapor  
Symptoms: Central nervous system depression  
GLP: yes  
Assessment: The substance or mixture is classified as  
specific target organ toxicant, single exposure, cate-  
gory 3 with narcotic effects.

Acute dermal toxicity : LD50 (rabbit): > 12,800 mg/kg

##### **64-17-5:**

Acute oral toxicity :

Assessment: The component/mixture is toxic after

single ingestion.  
Remarks: No data available



Acute inhalation toxicity : Assessment: The component/mixture is toxic after short term inhalation.  
Remarks: No data available

Acute dermal toxicity : Assessment: The component/mixture is toxic after single contact with skin.  
Remarks: No data available

### **Skin corrosion/irritation**

#### **Product:**

Remarks: May cause skin irritation in susceptible persons.

#### **Components;**

##### **67-63-0:**

Species: rabbit

Exposure time: 4 h

Method: In vivo

Result: Not irritating to skin

Remarks: Not irritating to skin

##### **64-17-5:**

Result: Irritating to skin.

Remarks: No data available

### **Serious eye damage/eye irritation**

#### **Product:**

Remarks: Eye irritation

#### **Components;**

##### **67-63-0:**

Species: rabbit

Result: Irritating to eyes.

Exposure time: 24 h

Method: In vivo

##### **64-17-5:**

Species: rabbit

Result: Eye irritation

### **Respiratory or skin sensitisation**

#### **Components:**

##### **67-63-0:**

Test Type: Buehler Test

Exposure routes: Dermal

Species: guinea pig

Assessment: Does not cause respiratory sensitisation.  
Method: OECD Test Guideline 406  
Result: Does not cause skin sensitisation.  
GLP: yes  
Remarks: not sensitising

**64-17-5:**

Test Type: lymph node assay  
Species: mouse  
Method: OECD Test Guideline 429  
GLP: No data available  
Remarks: Did not cause sensitisation on laboratory animals.

**Germ cell mutagenicity**

**Components:**

**67-63-0:**

Genotoxicity in vitro : Test Type: Ames test  
Metabolic activation: with and without metabolic activation  
Result: negative

: Test Type: Mammalian cell gene mutation assay Test species: Chinese hamster ovary (CHO) Metabolic activation: with and without metabolic activation  
Result: negative  
GLP: yes

Genotoxicity in vivo : Test Type: In vivo micronucleus test  
Test species: mouse (male and female)  
Application Route: Intraperitoneal  
Exposure time: Single  
Dose: 0, 350, 1173, 2500, 3500 mg/kg  
Result: negative  
GLP: yes

Germ cell mutagenicity- Assessment

: Did not show mutagenic effects in animal experiments.

**64-17-5:**

Genotoxicity in vitro : Test Type: Mammalian cell gene mutation assay  
Test species: mouse lymphoma cells  
Metabolic activation: with and without metabolic activation  
Method: OECD Test Guideline 476  
Result: negative

GLP: No data available

: Test Type: Ames test  
Test species: Salmonella typhimurium  
Metabolic activation: with and without metabolic activation

vation  
Method: OECD Test Guideline 471  
Result: negative  
GLP: No data available

Genotoxicity in vivo : Test Type: Dominant lethal assay  
Test species: mouse (male)  
Application Route: Oral  
Dose: 10 or 40% ethanol in water  
Method: OECD Test Guideline 478  
Result: Ambiguous  
GLP: No data available

Germ cell mutagenicity- Assessment

: Tests on bacterial or mammalian cell cultures did not show mutagenic effects.

### **Carcinogenicity**

#### **Components:**

##### **67-63-0:**

Species: rat, (male and female)  
Application Route: inhalation (vapour)  
Exposure time: 104 wks  
Activity duration: 6 h  
Dose: 0, 500, 2500, 5000 ppm  
Frequency of Treatment: 5 days/week  
NOAEL: 5,000 ppm

Method: OECD Test Guideline 451  
Result: did not display carcinogenic properties  
GLP: yes

Species: mouse, (male and female)  
Application Route: inhalation (vapour)  
Exposure time: 78 wks  
Activity duration: 6 h  
Dose: 0, 500, 2500, 5000 ppm  
Frequency of Treatment: 5 days/week  
NOAEL: 5,000 ppm

Result: did not display carcinogenic properties  
GLP: yes

Carcinogenicity - Assessment

: Not classifiable as a human carcinogen.

##### **64-17-5:**

Carcinogenicity - Assessment

: No evidence of carcinogenicity in animal studies.

## Reproductive toxicity

### Components;

#### 67-63-0:

Effects on fertility

: Test Type: Two-generation study  
Species: rat, male and female Dose:  
0, 100, 500, 1000 mg/kg bw/d  
General Toxicity - Parent: NOAEL: 500 mg/kg body weight  
General Toxicity F1: NOAEL: 500 mg/kg body weight  
Fertility: NOAEL: 1,000 mg/kg body weight  
Symptoms: Maternal effects. Fetotoxicity. Reduced offspring weight gain.  
Method: OECD Test Guideline 416  
Result: Animal testing did not show any effects on fertility.  
GLP: yes

Effects on fetal development

: Species: rabbit Application Route: Oral  
Dose: 0, 120, 240, 480 mg/kg bw/day Duration of Single Treatment: 13 d  
General Toxicity Maternal: NOAEL: 240 mg/kg body weight  
Developmental Toxicity: NOAEL: 480 mg/kg Symptoms: Maternal toxicity  
Result: No teratogenic effects. GLP: yes

Reproductive toxicity - Assessment

: Animal testing did not show any effects on fertility. Did not show teratogenic effects in animal experiments.

#### 64-17-5:

Effects on fertility

: Test Type: Two-generation study  
Species: mouse, male and female  
Application Route: oral  
Dose: 5, 10 and 15% v/v in water  
General Toxicity - Parent: NOAEL: 15 % diet  
General Toxicity F1: NOAEL: 10 % diet  
Symptoms: reduced litter size Reduced sperm motility in F1 generation  
Method: OECD Test Guideline 416  
GLP: No data available

Effects on foetal development

: Species: rat  
Application Route: Inhalation  
Dose: 10,000, 16,000 or 20,000 ppm  
General Toxicity Maternal: NOAEL: 16,000 ppm Teratogenicity: NOAEL: > 20,000 ppm  
Symptoms: No malformations were observed. Method: OECD Test Guideline 414  
GLP: No data available

Reproductive toxicity - Assessment

: No evidence of adverse effects on sexual function and fertility, and on development, based

on animal experiments.

### **STOT - single exposure**

**Product:**

Target Organs: Central nervous system

**Components:**

**67-63-0:**

Exposure routes: Inhalation

Target Organs: Central nervous system

Assessment: May cause drowsiness or dizziness.

Components:

No data available

### **STOT - repeated exposure**

Product:

No data available

Components:

No data available

Components:

No data available

### **Repeated dose toxicity**

**Components:**

**67-63-0:**

Species: rat, male and female

NOAEL: > 5000

Application Route: inhalation (vapour)

Exposure time: 13 wks

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

Dose: 0, 100, 500, 1500, 5000 ppm

Method: OECD Test Guideline 413

GLP: yes

Symptoms: Central nervous system depression

Species: mouse, male and female

NOAEL: > 5000

Application Route: inhalation (vapour)

Exposure time: 13 wks

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

Dose: 0, 100, 500, 1500, 5000 ppm

Method: OECD Test Guideline 413

GLP: yes  
Symptoms: Central nervous system depression

**64-17-5:**

Species: rat, male and female  
NOAEL: 10 ml/kg  
Application Route: Oral  
Exposure time: 7 or 14 wk  
Number of exposures: 2 times/d, 7 d/wk  
Dose: 5, 10, 20ml/kg of 16.25% etoh  
Method: OECD Test Guideline 408  
GLP: yes

**Aspiration toxicity**

**Components:**

**67-63-0:**

May be harmful if swallowed and enters airways.

**Further information**

**Product:**

Remarks: Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting., Concentrations substantially above the TLV value may cause narcotic effects., Solvents may degrease the skin.

**SECTION 12. ECOLOGICAL INFORMATION**

**Ecotoxicity**

**Components:**

**67-63-0:**

Toxicity to fish : LC50 (Pimephales promelas (fathead minnow)): 9,640 mg/l

Exposure time: 96 h  
Test Type: flow-through test

Toxicity to daphnia and other aquatic invertebrates

: EC50 (Daphnia magna (Water flea)): > 10,000 mg/l Exposure time: 24 h  
Test Type: static test

Toxicity to algae : Remarks: No data available

Toxicity to bacteria : Toxicity threshold (Pseudomonas putida): 1,050 mg/l  
Exposure time: 16 h

**64-17-5:**

Toxicity to fish : LC50 (Pimephales promelas (fathead minnow)):  
15,300 mg/l  
Exposure time: 96 h  
Test Type: flow-through test

Toxicity to daphnia and other aquatic invertebrates  
: EC50 (Ceriodaphnia dubia): 5,012 mg/l Exposure time: 48 h  
Test Type: static test

Toxicity to algae : EC50 (Chlorella vulgaris (Fresh water algae)): 275  
mg/l  
End point: Growth rate  
Exposure time: 72 h  
Test Type: static test  
Method: OECD Test Guideline 201  
GLP: No data available

### **Persistence and degradability**

#### **Components:**

##### **67-63-0:**

Biodegradability : Result: Readily biodegradable.  
Biodegradation: 95 %  
Method: OECD Test Guideline 301E

Chemical Oxygen De- mand (COD)  
: 0.00209 mg/g

Theoretical Oxygen De- mand (ThOD)  
: 0.00240 mg/g

##### **64-17-5:**

Biodegradability : Result: Readily biodegradable.

### **Bioaccumulative potential**

#### **Components:**

##### **67-63-0:**

Bioaccumulation : Bioconcentration factor (BCF): 3.16  
Remarks: Does not significantly accumulate in organisms.

Partition coefficient: n- octanol/water  
: log Pow: 0.05 (25 °C)

##### **64-17-5:**

Bioaccumulation : Remarks: Bioaccumulation is unlikely.

### **Mobility in soil**

#### **Components:**

**67-63-0:**  
Stability in soil : Remarks: Adsorbs on soil.

**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 NEXEO's Environmental Services Group at 800-637-7922.

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, the empty drum.

**SECTION 14. TRANSPORT INFORMATION**

**IATA (International Air Transport Association):** UN1219, Isopropanol, 3 , II

**IMDG (International Maritime Dangerous Goods):** UN1219, ISOPROPANOL, 3, II,  
Flash Point: 12 °C(54 °F)

**DOT (Department of Transportation):** UN1219, Isopropanol, 3, II



## SECTION 15. REGULATORY INFORMATION

**OSHA Hazards** : Flammable liquid, Moderate eye irritant

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

#### **CERCLA Reportable Quantity**

This material does not contain any components with a CERCLA RQ.

#### **SARA 304 Extremely Hazardous Substances Reportable Quantity**

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

#### **SARA 311/312 Hazards**

: Fire Hazard  
Acute Health Hazard

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

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

### **Clean Air Act**

This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 12 (40 CFR 61).

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).

The following chemical(s) are listed under the U.S. Clean Air Act Section 111 SOCM I Intermediate or Final VOC's (40 CFR 60.489):

67-63-0	Isopropyl alcohol	100 %
64-17-5	Ethanol	0.1 %
71-23-8	n-Propanol	0.015 %
<b>Clean Water Act</b>		

This product does not contain any Hazardous Substances listed under the U.S. Clean Water 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**

#### **Massachusetts Right To Know**

67-63-0 Isopropyl alcohol 90 - 100 %

**Pennsylvania Right To Know**

67-63-0

Isopropyl alcohol

90 - 100 %

**New Jersey Right To Know**

67-63-0	Isopropyl alcohol	90 - 100 %
64-17-5	Ethanol	0.1 - 1 %

**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.

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

<b>1907/2006 (EU)</b>	:	n (Negative listing) (Not in compliance with the inventory)
<b>Switzerland. New notified substances and declared preparations</b>	:	y (positive listing) (The formulation contains substances listed on the Swiss Inventory)
<b>United States TSCA Inventory</b>	:	y (positive listing) (On TSCA Inventory)
<b>Canadian Domestic Substances List (DSL)</b>	:	y (positive listing) (All components of this product are on the Canadian DSL.)
<b>Australia Inventory of Chemical Substances (AICS)</b>	:	y (positive listing) (On the inventory, or in compliance with the inventory)
<b>New Zealand. Inventory of Chemical Substances</b>	:	y (positive listing) (On the inventory, or in compliance with the inventory)
<b>Japan. ENCS - Existing and New Chemical Substances Inventory</b>	:	y (positive listing) (On the inventory, or in compliance with the inventory)
<b>Japan. ISHL - Inventory of Chemical Substances (METI)</b>	:	y (positive listing) (On the inventory, or in compliance with the inventory)
<b>Korea. Korean Existing Chemicals Inventory (KECI)</b>	:	y (positive listing) (On the inventory, or in compliance with the inventory)
<b>Philippines Inventory of Chemicals and Chemical Substances (PICCS)</b>	:	y (positive listing) (On the inventory, or in compliance with the inventory)

<b>China. Inventory of Existing Chemical Substances in China (IECSC)</b>	: y (positive listing) (On the inventory, or in compliance with the inventory)
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**SECTION 16. OTHER INFORMATION**

**Further information**

**NFPA:**

Flammability

**HMIS III:**

Special hazard.

0 = not significant, 1 = Slight,  
2 = Moderate, 3 = High 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 to their circumstances.

**Legacy MSDS:**

R0001444

**Material number:**

16067144, 708297, 153649, 16063169, 16062664, 16062659, 16062658,  
16056239, 16056234, 16056233, 16056232, 16056231, 16056230, 16056236,  
16056235, 16056229, 16056228, 16056212, 16061245, 16053485, 16052635,  
16049720, 16045941, 16045942, 16030493, 16030184, 16023890, 16020147,  
16017860, 16010158, 16000104, 779179, 777274, 776868, 772812, 772811,  
749963, 744289, 744288, 744287, 737212, 728214, 717444, 713300, 696169,  
696170, 686168, 667236, 667235, 642426, 638919, 628350, 622971, 620243,  
615270, 614245, 614244, 607424, 604761, 598540, 598539, 598538, 596088,  
590687, 584582, 574318, 568108, 554273, 554170, 554086, 554045, 554336,  
554300, 550689, 549773, 554335, 554291, 554272, 554257, 554206, 554169,  
554149, 554085, 554371, 556671, 547315, 547297, 551361, 544760, 508619,  
508618, 508414, 55018, 73136, 55939, 55835, 104158, 56756, 105079, 71262

<b>Key or legend to abbreviations and acronyms used in the safety data sheet</b>			
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%		