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SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product name : Startex Denatured Alcohol

Product Use Descrip-: Alcohol solvent.

tion

Manufacturer or supplier's details

Company : Nexeo Solutions LLC - STARTEX™ Address

3 Waterway Square Place Suite 1000

Woodlands, Tx. 77380 United States of America

Emergency telephone number:

Health North America: 1-855-NEXEO4U (1-855-639-3648) Health International: 1-855-NEXEO4U (1-855-639-3648) Transport North America: CHEMTREC 800.424.9300

Additional Infor-

mation:

: Responsible Party: Product Safety Group

E-Mail: msds@nexeosolutions.com SDS Requests: 1-855-429-2661 SDS Requests Fax: 1-281-500-2370 Website: www.nexeosolutions.com

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification

Flammable liquids : Category 2

Acute toxicity (Oral) : Category 4

Acute toxicity

(Inhalation)

: Category 4

Acute toxicity (Dermal) : Category 4

Eye irritation : Category 2A

Carcinogenicity : Category 2

Reproductive toxicity : Category 2

icity - single exposure

Specific target organ tox- : Category 1 (Eyes, Central nervous system)

Specific target organ tox-

icity - single exposure

: Category 3 (Respiratory system)

GHS Label element



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Hazard pictograms







Signal word : Danger

Hazard statements : H225 Highly flammable liquid and vapour.

H302 + H312 + H332 Harmful if swallowed, in contact

with skin or if inhaled

H319 Causes serious eye irritation.

H335 + H336 May cause respiratory irritation, and

drowsiness or dizziness.

H351 Suspected of causing cancer.

H361 Suspected of damaging fertility or the unborn

child.

H371 May cause damage to organs.

Precautionary statements :

: Prevention:

P201 Obtain special instructions before use.

P210 Keep away from open flames/hot surfaces. - No

smoking.

P233 Keep container tightly closed.

P240 Ground/bond container and receiving equipment.

P242 Use only non-sparking tools.

P264 Wash skin thoroughly after handling.

P271 Use only outdoors or in a well-ventilated area. P281 Use personal protective equipment as required.

Response:

P301 + P312 + P330 IF SWALLOWED: Call a POISON CENTER or doctor/ physician if you feel unwell. Rinse mouth.

P303 + P361 + P353 IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower.

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

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

P307 + P311 IF exposed: Call a POISON CENTER or doctor/ physician.

P370 + P378 In case of fire: Use dry sand, dry chemical

or alcohol-resistant foam for extinction.

Storage:

P403 + P235 Store in a well-ventilated place. Keep cool. P405 Store locked up.

Disposal:



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P501 Dispose of contents/ container to an approved waste disposal plant.

Potential Health Effects

Carcinogenicity:

IARC Group 2B: Possibly carcinogenic to humans

64742-49-0 Naphtha (pet), hydrotreated

It

64742-89-8 Solvent naphtha (pet), It

aliph.

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 antici-

pated carcinogen by NTP.

Emergency Overview

Appearance	liquid
Colour	colourless, white
Odour	ester-like
Hazard Summary	No information available.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Hazardous components

CAS-No.	Chemical Name	Concentration (%)
64-17-5	Ethanol	70 - 90
67-56-1	Methanol	20 - 30
141-78-6	Ethyl acetate	1 - 5
64742-49-0	Naphtha (pet), hydrotreated It	0.1 - 1
64742-89-8	Solvent naphtha (pet), lt aliph.	0.1 - 1
142-82-5	Heptane	0.1 - 1

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SECTION 4. FIRST AID MEASURES

General advice : Show this safety data sheet to the doctor in attend-

ance.

If inhaled : If symptoms persist, call a 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.

If eye irritation persists, consult a specialist.

If swallowed : Keep respiratory tract clear.

Take victim immediately to hospital.

SECTION 5. FIREFIGHTING MEASURES

Suitable extinguishing

media

: Alcohol-resistant foam Carbon dioxide (CO2)

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.

Hazardous combustion

products

: Carbon oxides

Specific extinguishing

methods

: Use a water spray to cool fully closed containers.

Further information : Collect contaminated fire extinguishing water sepa-

rately. This must not be discharged into drains. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regu-

lations.

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 fire-

fighting if necessary.



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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 noncombustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regula-

tions (see section 13).

SECTION 7. HANDLING AND STORAGE

Advice on safe handling

: Avoid formation of aerosol.

Do not breathe vapours/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 discharg-

es.

Provide sufficient air exchange and/or exhaust in work

rooms.

Container may be opened only under exhaust ventila-

tion hood.

Open drum carefully as content may be under pres-

sure.

Dispose of rinse water in accordance with local and

national regulations.

Conditions for safe stor-

age

: No smoking.

Keep container tightly closed in a dry and well-

ventilated place.



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Containers which are opened must be carefully resealed 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
64-17-5	Ethanol	TWA	1,000 ppm	ACGIH
		TWA	1,000 ppm 1,900 mg/m3	NIOSH REL
		TWA	1,000 ppm 1,900 mg/m3	OSHA Z-1
		TWA	1,000 ppm 1,900 mg/m3	OSHA PO
		STEL	1,000 ppm	ACGIH
67-56-1	Methanol	TWA	200 ppm	ACGIH
		STEL	250 ppm	ACGIH
		TWA	200 ppm 260 mg/m3	NIOSH REL
		ST	250 ppm 325 mg/m3	NIOSH REL
		TWA	200 ppm 260 mg/m3	OSHA Z-1
		STEL	250 ppm 325 mg/m3	OSHA P0
		TWA	200 ppm 260 mg/m3	OSHA P0
141-78-6	Ethyl acetate	TWA	400 ppm	ACGIH
		TWA	400 ppm 1,400 mg/m3	NIOSH REL
		TWA	400 ppm 1,400 mg/m3	OSHA Z-1
		TWA	400 ppm 1,400 mg/m3	OSHA PO
64742-49-0	Naphtha (pet), hydrotreated It	TWA	500 ppm 2,000 mg/m3	OSHA Z-1
		TWA	400 ppm 1,600 mg/m3	OSHA PO
64742-89-8	Solvent naphtha (pet), lt aliph.	TWA	500 ppm 2,000 mg/m3	OSHA Z-1



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		TWA	400 ppm 1,600 mg/m3	OSHA PO
142-82-5	Heptane	TWA	85 ppm 350 mg/m3	NIOSH REL
		С	440 ppm 1,800 mg/m3	NIOSH REL
		TWA	500 ppm 2,000 mg/m3	OSHA Z-1
		TWA	400 ppm 1,600 mg/m3	OSHA P0
		STEL	500 ppm 2,000 mg/m3	OSHA P0

Biological occupational exposure limits

Components	CAS-No.	Control parame-	Biological specimen	pling	Permissi- ble con-	Basis
		ters		time	centration	
Methanol	67-56-1	Methanol	Urine	End of shift (As soon as possible after expo- sure ceases)	15 mg/l	ACGIH BEI

Personal protective equipment

Respiratory protection : 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

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.



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SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : liquid

Colour : colourless, white

Odour : ester-like

Odour Threshold : No data available

: No data available рΗ

Freezing Point (Melting

point/freezing point)

: No data available

Boiling Point (Boiling

point/boiling range)

: 63 - 79 °C (145 - 174 °F)

: -1 °C (30 °F) Flash point

Evaporation rate : No data available

: No data available Flammability (solid, gas)

Burning rate : No data available

Upper explosion limit : No data available

Lower explosion limit : 4.9 %(V)

: 61.3 mmHg @ 20 °C (68 °F) Vapour pressure

Relative vapour density 1.5(Air = 1.0)

Relative density : 0.797Reference substance: (water = 1)

Density : No data available

Bulk density : No data available

Solubility(ies)

Water solubility : No data available

Solubility in other sol-

vents

: No data available

Partition coefficient: n-

octanol/water

: No data available

Auto-ignition temperature : 293 °C



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Thermal decomposition : No data available

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 : Keep away from heat, flame, sparks and other ignition

sources.

Incompatible materials : Alkali metals

Ammonia

Oxidizing agents

peroxides Strong acids

Hazardous decomposition

products

: Carbon oxides

SECTION 11. TOXICOLOGICAL INFORMATION

Acute toxicity

Product:

Acute oral toxicity : Acute toxicity estimate : 422.91 mg/kg

Method: Calculation method

Acute inhalation toxicity : Acute toxicity estimate : 12.69 mg/l

Exposure time: 4 h
Test atmosphere: vapour
Method: Calculation method

Acute dermal toxicity : Acute toxicity estimate : 1,269 mg/kg

Method: Calculation method

Components:

64-17-5:



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

Acute inhalation toxicity : LC50 (rat): 124.7 mg/l

Acute dermal toxicity : Remarks: No data available

67-56-1:

Acute oral toxicity : LD50 (rat): 100 mg/kg

Assessment: The component/mixture is toxic after

single ingestion.

Acute inhalation toxicity : LC50 (rat): 5 mg/l

Assessment: The component/mixture is toxic after

short term inhalation.

Acute dermal toxicity : LD50 (rabbit): 300 mg/kg

Assessment: The component/mixture is toxic after

single contact with skin.

141-78-6:

Acute oral toxicity : LD50 (rat): 5,620 mg/kg

Acute inhalation toxicity : LD L0 (rat, male and female): > 22.5 mg/l

Exposure time: 6 h
Test atmosphere: vapour

Assessment: The substance or mixture is classified as specific target organ toxicant, single exposure, cate-

gory 3 with narcotic effects. Remarks: Not classified

Acute dermal toxicity : LD50 (rabbit): > 20,000 mg/kg

64742-49-0:

Acute oral toxicity : LD50 (rat, male and female): > 5,000 mg/kg

Method: OECD Test Guideline 401

GLP: yes

Acute inhalation toxicity : Remarks: No data available

Acute dermal toxicity : LD50 (rabbit, male and female): > 2,000 mg/kg

Method: OECD Test Guideline 402

GLP: yes

64742-89-8:

Acute oral toxicity : LD50 (rat, male and female): > 5,000 mg/kg

Method: OECD Test Guideline 401

GLP: yes

Acute inhalation toxicity : Remarks: No data available



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Acute dermal toxicity : LD50 (rabbit, male and female): > 2,000 mg/kg

Method: OECD Test Guideline 402

GLP: yes

142-82-5:

Acute oral toxicity : LD50 (rat, male and female): 5,000 mg/kg

Method: OECD Test Guideline 401

Symptoms: Salivation

GLP: yes

Remarks: Information given is based on data obtained

from similar substances.

Acute inhalation toxicity : LC50 (rat, male and female): 73.5 mg/l

Exposure time: 4 h

Test atmosphere: vapour

Method: OECD Test Guideline 403

Acute dermal toxicity : LD50 (rabbit, male and female): > 2,000 mg/kg

Method: OECD Test Guideline 402

GLP: yes

Remarks: Information given is based on data obtained

from similar substances.

Skin corrosion/irritation

Components:

64-17-5:

Species: rabbit

Result: No skin irritation

67-56-1:

Species: rabbit

Result: No skin irritation

141-78-6:

Species: rabbit

Result: Mild skin irritation

64742-49-0:

Species: rabbit

Result: Irritating to skin.

64742-89-8:

Species: rabbit Exposure time: 4 h Result: Irritating to skin.

142-82-5:

Species: rabbit Exposure time: 24 h



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Method: OECD Test Guideline 404

Result: Irritating to skin.

GLP: yes

Remarks: Based on a similar product formulation.

Serious eye damage/eye irritation

Product:

Result: Irritating to eyes.

Components:

64-17-5:

Species: rabbit

Result: Irritating to eyes.

67-56-1:

Species: rabbit

Result: No eye irritation

141-78-6:

Species: rabbit

Result: Irritating to eyes.

64742-49-0:

Species: rabbit

Result: Irritating to eyes.

64742-89-8:

Species: rabbit

Result: Irritating to eyes.

142-82-5:

Species: rabbit

Result: Irritating to eyes.

Method: OECD Test Guideline 405

GLP: yes

Remarks: Information given is based on data obtained from similar substances.

Respiratory or skin sensitisation

Components:

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.



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67-56-1:

Test Type: Maximisation Test (GPMT)

Species: guinea pig

Method: OECD Test Guideline 406

Result: Did not cause sensitisation on laboratory animals.

141-78-6:

Species: guinea pig

Result: Did not cause sensitisation on laboratory animals.

64742-49-0:

Test Type: Buehler Test Species: guinea pig

Result: Did not cause sensitisation on laboratory animals.

64742-89-8:

Test Type: Buehler Test Species: guinea pig

Result: Did not cause sensitisation on laboratory animals.

142-82-5:

Test Type: Maximization test

Species: guinea pig

Method: OECD Test Guideline 406

Result: Does not cause skin sensitisation.

Remarks: Based on a similar product formulation.

Germ cell mutagenicity

Components:

64-17-5:

Genotoxicity in vitro : Test Type: Mammalian cell gene mutation assay

Test species: mouse lymphoma cells

Metabolic activation: with and without metabolic acti-

vation

Method: OECD Test Guideline 476

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: negative GLP: No data available

Germ cell mutagenicity-

Assessment

: Mutagenicity classification not possible from current

data



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67-56-1:

Genotoxicity in vitro : Test Type: DNA damage and/or repair

Metabolic activation: with and without metabolic acti-

vation

Result: Ambiguous

Genotoxicity in vivo : Test Type: In vivo micronucleus test

Test species: mouse (male and female)

Cell type: Bone marrow

Application Route: Intraperitoneal

Exposure time: Single

Dose: 0, 1920, 3200, 4480 mg/kg

Result: negative

Germ cell mutagenicity-

Assessment

: Tests on bacterial or mammalian cell cultures did not

show mutagenic effects.

141-78-6:

Genotoxicity in vitro

: Test Type: Ames test

Test species: Salmonella typhimurium

Metabolic activation: with and without metabolic acti-

vation

Method: OECD Test Guideline 471

Result: negative

GLP: No data available

: Test Type: Chromosome aberration test in vitro Test species: Chinese hamster ovary (CHO)

Metabolic activation: with and without metabolic acti-

vation

Method: OECD Test Guideline 473

Result: negative GLP: No data available

Genotoxicity in vivo : Test Type: In vivo micronucleus test

Test species: Chinese hamster (male and female)

Application Route: Oral Dose: 2500 mg/kg bw

Method: OECD Test Guideline 474

Result: negative

GLP: No data available

Germ cell mutagenicity-

Assessment

: Animal testing did not show any mutagenic effects.

64742-49-0:

Germ cell mutagenicity-

Assessment

: Mutagenicity classification not possible from current

data

64742-89-8:

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Germ cell mutagenicity-

Assessment

: Mutagenicity classification not possible from current

data

142-82-5:

Genotoxicity in vitro : Test Type: Chromosome aberration test in vitro

Test species: Rat liver

Metabolic activation: Without metabolic activation

Method: OECD Test Guideline 473

Result: negative

: Test Type: Ames test

Metabolic activation: with and without metabolic acti-

vation

Method: OECD Test Guideline 471

Result: negative

Germ cell mutagenicity-

Assessment

: Did not show mutagenic effects in animal experi-

ments.

Carcinogenicity

Components:

64-17-5:

Carcinogenicity - As-

sessment

: Carcinogenicity classification not possible from current

data.

67-56-1:

Carcinogenicity - As-

sessment

: Not classifiable as a human carcinogen.

141-78-6:

Species: mouse, (male and female)

Application Route: Intraperitoneal injection

Exposure time: 8 wk

Dose: 150 and 750 mg/kg bw/injection Frequency of Treatment: 3 days/week

Result: did not display carcinogenic properties

Carcinogenicity - As-

sessment

: Animal testing did not show any carcinogenic effects.

64742-49-0:

Carcinogenicity - As-

sessment

: Not classifiable as a human carcinogen.

64742-89-8:

Carcinogenicity - As-

sessment

: Not classifiable as a human carcinogen.

142-82-5:

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Remarks: This information is not available.

Carcinogenicity - As-

sessment

: Carcinogenicity classification not possible from current

data.

Reproductive toxicity

Components:

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 devel-

opment

: 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

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

data.

67-56-1:

Effects on fertility : Test Type: Two-generation study

Species: rat, male and female Application Route: Inhalation Dose: 0, 0.013, 0.13, 1.3 mg/L Duration of Single Treatment: 20 h

General Toxicity - Parent: NOAEC: 1.3 mg/l General Toxicity F1: NOAEC: 0.13 mg/l

Fertility: NOAEC: 1.3 mg/l

Symptoms: Effects on postnatal development. Result: Animal testing did not show any effects on

fertility.

Reproductive toxicity -

Assessment

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

data.



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141-78-6:

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 Method: OECD Test Guideline 416

GLP: No data available

Remarks: Information given is based on data obtained

from similar substances.

Species: rat, male

Application Route: Inhalation Dose: 350, 750, 1500 ppm Duration of Single Treatment: 6 h Frequency of Treatment: 5 days/week

General Toxicity - Parent: NOAEL: 1,500 ppm Result: Animal testing did not show any effects on

fertility. GLP: yes

Effects on foetal devel-

opment

: 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

Remarks: Information given is based on data obtained

from similar substances.

Reproductive toxicity -

Assessment

: No toxicity to reproduction

Animal testing did not show any effects on foetal de-

velopment.

64742-49-0:

Reproductive toxicity -

Assessment

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

data.

64742-89-8:

Reproductive toxicity -

Assessment

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

data.

142-82-5:

Effects on fertility : Test Type: Two-generation study

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Species: rat, male and female Application Route: vapour Dose: 0, 900, 3000, 9000 ppm

Frequency of Treatment: 5 days/week

General Toxicity - Parent: NOAEC: 3,000 ppm General Toxicity F1: NOAEC: 3,000 ppm

Fertility: NOAEC: 9,000 ppm

Symptoms: Reduced maternal body weight gain. Re-

duced offspring weight gain. Method: OECD Test Guideline 416 Result: No reproductive effects.

GLP: yes

Remarks: Information given is based on data obtained

from similar substances.

Effects on foetal devel-

opment

: Species: mouse

Application Route: inhalation (vapour)

Dose: 0, 900, 3000, 9000 ppm Duration of Single Treatment: 10 d Frequency of Treatment: 6 hr/day

General Toxicity Maternal: NOAEC: 900 ppm Developmental Toxicity: NOAEC: 3,000 ppm

Symptoms: Skeletal malformations. Method: OECD Test Guideline 414

GLP: yes

Remarks: Information given is based on data obtained

from similar substances.

Reproductive toxicity -

Assessment

: Animal testing did not show any effects on fertility. Embryotoxicity classification not possible from current

data.

STOT - single exposure

Product: No data available

Components:

64-17-5:

Exposure routes:	Target Organs:	Assessment:	Remarks:
Inhalation	Central nervous system	May cause drowsiness or dizziness., The substance or mixture is classified as specific target organ toxicant, single exposure, category 3 with narcotic effects.	
Inhalation	Respiratory system	May cause respiratory irritation., The	



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	substance or mix- ture is classified as specific target or- gan toxicant, single exposure, category 3 with respiratory tract irritation.
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67-56-1:

Exposure routes:	Target Organs:	Assessment:	Remarks:
	Eyes, Central nerv- ous system	Causes damage to organs., The substance or mixture is classified as specific target organ toxicant, single exposure, category 1.	

141-78-6:

Exposure routes:	Target Organs:	Assessment:	Remarks:
Inhalation	Central nervous system	May cause drowsiness or dizziness., The substance or mixture is classified as specific target organ toxicant, single exposure, category 3 with narcotic effects.	

64742-49-0:

Exposure routes:	Target Organs:	Assessment:	Remarks:
Inhalation	Central nervous system	May cause drowsiness or dizziness., The substance or mixture is classified as specific target organ toxicant, single exposure, category 3 with narcotic effects.	

64742-89-8:No data available

142-82-5:

Exposure routes:	Target Organs:	Assessment:	Remarks:
EXPOSUIE IOULES.	I alyel Olyalis.	MSSCSSIIICIIL.	REIIIai NS.

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mixture is classified as specific target organ toxicant, sin- gle exposure, cate- gory 3 with narcotic effects.	Inhalation	Central nervous system	as specific target organ toxicant, sin- gle exposure, cate- gory 3 with narcotic	
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STOT - repeated exposure

Product: No data available

Components:

64-17-5:No data available

67-56-1:No data available

141-78-6:No data available

64742-49-0:No data available

64742-89-8: No data available

142-82-5: No data available

Repeated dose toxicity

Components:

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

67-56-1:

Species: mouse, male and female

NOAEL: 1.3 mg/l



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Application Route: Inhalation Exposure time: 12 mths

Number of exposures: Continuous Dose: 0, 0.013, 0.13, 1.3 mg/L

141-78-6:

Species: rat, male and female

NOAEL: 900 mg/kg LOAEL: 3,600 mg/kg Application Route: Oral Exposure time: 90-92 d Number of exposures: daily

Dose: 0, 300, 900 and 3600 mg/kg bw

GLP: yes

Species: rat, male and female

NOAEL: 350 ppm

Application Route: Inhalation

Exposure time: 94 d

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

Dose: 0, 350, 750, 1500 ppm Symptoms: Local irritation

64742-89-8:

Species: rat, male and female

NOAEL: 1402

Application Route: inhalation (vapour)

Test atmosphere: vapour Exposure time: 13 weeks

Number of exposures: 6 hours/day, 5 days/week

Dose: 322, 1402, 9869 mg/m3

GLP: yes

Target Organs: Kidney

Symptoms: Nasal and ocular discharge

142-82-5:

Species: rat, male NOAEL: 12470 mg/m3

Application Route: inhalation (vapour)

Exposure time: 16 wks

Number of exposures: 12 h/d, 7 d/wk

Dose: 0, 12470 mg/3

Repeated dose toxicity - : Causes skin irritation.

Assessment

Aspiration toxicity

Components:

64-17-5:



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No aspiration toxicity classification

141-78-6:

No aspiration toxicity classification

64742-49-0:

May be fatal if swallowed and enters airways.

64742-89-8:

May be fatal if swallowed and enters airways.

142-82-5:

Aspiration Toxicity - Category 1

Further information

Product:

Remarks: Solvents may degrease the skin.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Components:

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 inverte-

brates

: 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

67-56-1:

Toxicity to fish : LC50 (Lepomis macrochirus (Bluegill sunfish)): 15,400

mg/l

Exposure time: 96 h

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Test Type: flow-through test

Toxicity to daphnia and other aquatic inverte-

brates

: EC50 (Daphnia magna (Water flea)): > 10,000 mg/l

Exposure time: 48 h Test Type: static test

Toxicity to algae : EC50 (Scenedesmus capricornutum (fresh water al-

gae)): 22,000 mg/l End point: Growth rate Exposure time: 96 h Test Type: static test

Method: OECD Test Guideline 201

Toxicity to bacteria : IC50 (activated sludge): > 1,000 mg/l

End point: Growth rate Exposure time: 3 h Test Type: Static

Method: OECD Test Guideline 209

141-78-6:

Toxicity to fish : LC50 (Pimephales promelas (fathead minnow)): 220

mg/l

Exposure time: 96 h

Toxicity to daphnia and other aquatic inverte-

brates

: EC50 (Daphnia magna (Water flea)): 2,300 mg/l

Exposure time: 24 h

Toxicity to algae : EC50 (Desmodesmus subspicatus (green algae)):

4,300 mg/l

Exposure time: 24 h

64742-49-0:

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 10 mg/l

Exposure time: 96 h

Toxicity to daphnia and other aquatic inverte-

brates

: EC50 (Daphnia magna (Water flea)): 4.5 mg/l

Exposure time: 48 h

Toxicity to algae : EC50 (Pseudokirchneriella subcapitata (green algae)):

3.71 mg/l

Exposure time: 96 h

Ecotoxicology Assessment

Acute aquatic toxicity : Toxic to aquatic life.

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

64742-89-8:

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Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 8.2

mg/l

Exposure time: 96 h Test Type: semi-static test

Toxicity to daphnia and other aquatic inverte-

brates

: EC50 (Daphnia magna (Water flea)): 4.5 mg/l

Exposure time: 48 h Test Type: Immobilization Analytical monitoring: yes

Toxicity to algae : EC50 (Pseudokirchneriella subcapitata (green algae)):

3.7 mg/l

Exposure time: 96 h Test Type: static test

Ecotoxicology Assessment

Acute aquatic toxicity : Toxic to aquatic life.

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

142-82-5:

Toxicity to fish : LC50 (Carassius auratus (goldfish)): 4 mg/l

Exposure time: 24 h

Remarks: Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Toxicity to daphnia and other aquatic inverte-

brates

: EC50 (Daphnia magna (Water flea)): 1.5 mg/l

Exposure time: 48 h Test Type: static test

Remarks: Very toxic to aquatic organisms.

Toxicity to algae : Remarks: No data available

Ecotoxicology Assessment

Acute aquatic toxicity : Very toxic to aquatic life.

Chronic aquatic toxicity : Very toxic to aquatic life with long lasting effects.

Persistence and degradability

Components:

64-17-5:

Biodegradability : Result: Readily biodegradable.

67-56-1:

Biodegradability : aerobic

Result: Readily biodegradable.

Biodegradation: 72 %

Remarks: Readily biodegradable

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Biochemical Oxygen De- : 600 - 1,120 mg/g

mand (BOD)

Chemical Oxygen De-

mand (COD)

: 1,420 mg/g

BOD/COD : BOD: 600 - 1120COD: 1420

Stability in water : Hydrolysis: 91 % at19 °C(72 h)

Remarks: Hydrolyses on contact with water.

Hydrolyses readily.

141-78-6:

Biodegradability : anaerobic

> Inoculum: activated sludge Result: Readily biodegradable.

64742-49-0:

Biodegradability : aerobic

> Inoculum: activated sludge Concentration: 20 mg/l Biodegradation: 74.30 % Exposure time: 56 d

GLP: yes

Remarks: Inherently biodegradable.

64742-89-8:

Biodegradability : Concentration: 49.2 mg/l

Result: Readily biodegradable.

Biodegradation: 77 % Testing period: 2 d Exposure time: 28 d

GLP: yes

142-82-5:

Biodegradability : Primary biodegradation

> Inoculum: activated sludge Concentration: 100 mg/l Biodegradation: 100 % Testing period: 2 d Exposure time: 25 d

Remarks: Readily biodegradable

Bioaccumulative potential

Components:

64-17-5:

Bioaccumulation : Remarks: Bioaccumulation is unlikely.

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67-56-1:

Bioaccumulation : Species: Cyprinus carpio (Carp)

Bioconcentration factor (BCF): 1.0

Exposure time: 72 d Temperature: 20 °C Concentration: 5 mg/l

Remarks: This substance is not considered to be very

persistent nor very bioaccumulating (vPvB).

Partition coefficient: n-

octanol/water

: log Pow: -0.77

141-78-6:

Partition coefficient: n-

octanol/water

: log Pow: 0.68 (25 °C)

pH: 7

64742-49-0:

Partition coefficient: n-

octanol/water

: Remarks: No data available

64742-89-8:

Partition coefficient: n-

octanol/water

: log Pow: 2.13 - 4.85 (25 °C)

Mobility in soil

No data available

Other adverse effects

No data available

Product:

Regulation 40 CFR Protection of Environment; Part 82 Protection

of Stratospheric Ozone - CAA Section 602 Class I Sub-

stances

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 in-

formation

: An environmental hazard cannot be excluded in the event of unprofessional handling or disposal., Harmful

to aquatic life with long lasting effects.

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues : Dispose of in accordance with all applicable local,

state and federal regulations.

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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): UN1987, ALCOHOLS, N.O.S., (ETHANOL, METHANOL), 3, II, Flash Point:-1 °C(30 °F)

IMDG (International Maritime Dangerous Goods): UN1987, ALCOHOLS, N.O.S., (ETHANOL, METHANOL), 3, II

DOT (Department of Transportation): UN1987, ALCOHOLS, N.O.S., (ETHANOL, METHANOL), 3, II

SECTION 15. REGULATORY INFORMATION

OSHA Hazards : Flammable liquid, Carcinogen, Harmful by ingestion.,

Harmful by skin absorption., Moderate eye irritant, Moderate respiratory irritant, Reproductive hazard,

Harmful by inhalation.

WHMIS Classification : B2: Flammable liquid

D1B: Toxic Material Causing Immediate and Serious

Toxic Effects

D2B: Toxic Material Causing Other Toxic Effects

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

CERCLA Reportable Quantity

Components	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
Methanol	67-56-1	5000	*

^{*:} Calculated RQ exceeds reasonably attainable upper limit.

SARA 304 Extremely Hazardous Substances Reportable Quantity

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

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SARA 311/312 : Fire Hazard

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:

67-56-1 Methanol 23.64 %

Clean Air Act

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

67-56-1	Methanol	23.64 %
110-54-3	Hexane	0.0033 %
108-88-3	Toluene	0.0003 %
100-41-4	Ethylbenzene	0.0659 PPM
71-43-2	Benzene	0.0659 PPM

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 SOCMI Intermediate or Final VOC's (40 CFR 60.489):

64-17-5	Ethanol	75.2 %
67-56-1	Methanol	23.64 %
141-78-6	Ethyl acetate	4.26 %
110-82-7	Cyclohexane	0.0514 %
108-88-3	Toluene	0.0003 %
100-41-4	Ethylbenzene	0.0659 PPM
71-43-2	Benzene	0.0659 PPM

Clean Water Act

The following Hazardous Substances are listed under the U.S. CleanWater Act, Section 311, Table 116.4A:

110-82-7	Cyclohexane	0.0514 %
108-88-3	Toluene	0.0003 %
100-41-4	Ethylbenzene	0.0659 PPM
71-43-2	Benzene	0.0659 PPM

The following Hazardous Chemicals are listed under the U.S. CleanWater Act, Section 311, Table 117.3:

110-82-7	Cyclohexane	0.0514 %
108-88-3	Toluene	0.0003 %
100-41-4	Ethylbenzene	0.0659 PPM
71-43-2	Benzene	0.0659 PPM

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



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US State Regulations

Massachusetts Right To Know

64-17-5	Ethanol	70 - 90 %
67-56-1	Methanol	20 - 30 %
141-78-6	Ethyl acetate	1 - 5 %

Pennsylvania Right To Know

64-17-5	Ethanol	70 - 90 %
67-56-1	Methanol	20 - 30 %
141-78-6	Ethyl acetate	1 - 5 %
110-82-7	Cyclohexane	0 - 0.1 %

New Jersey Right To Know

64-17-5	Ethanol	70 - 90 %
67-56-1	Methanol	20 - 30 %
141-78-6	Ethyl acetate	1 - 5 %

California Prop 65 WARNING! This product contains a chemical known to

the State of California to cause cancer.

100-41-4 Ethylbenzene 71-43-2 Benzene

> WARNING: This product contains a chemical known to the State of California to cause birth defects or other

reproductive harm.

67-56-1 Methanol 108-88-3 Toluene 71-43-2 Benzene

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

United States TSCA Inventory	:	y (positive listing) (On TSCA Invento- ry)
Canadian Domestic Substances List (DSL)	:	y (positive listing) (This product contains the following components that are not on the Canadian DSL nor NDSL.)
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,

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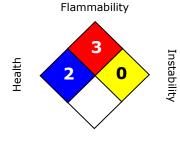
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		or in compliance with the inventory)
Japan. ENCS - Existing and New Chemical Substances Inventory	:	y (positive listing) (On the inventory, or in compliance with the inventory)
Korea. Korean Existing Chemicals Inventory (KECI)	:	y (positive listing) (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:



Special hazard.

HMIS III:

HEALTH	2*
FLAMMABILITY	3
PHYSICAL HAZARD	0

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

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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. This MSDS has been prepared by NEXEO $^{\text{TM}}$ Solutions EHS Product Safety Department (1-855-429-2661) MSDS@nexeosolutions.com.

Material number:

16061938, 16056001, 16056000, 16055999, 16055998, 16055997

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	Philipines 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 Compositon, Complex Reaction Products, and Biological Materials	
<=	Less Than or Equal To	WHMIS	Workplace Hazardous Materials Information System	
LC50	LC50 Lethal Concentration 50%			

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