

Safety Data Sheet

HBB All Purpose Thinner

Version 1.0

Revision Date: 07/07/2015

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product name : HBB All Purpose Thinner
Product Use Description : Thinner

Manufacturer or supplier's details

Company : Nexeo Solutions LLC
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 Information: : 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
Skin irritation : Category 2
Eye irritation : Category 2A
Reproductive toxicity : Category 2
Specific target organ toxicity - single exposure : Category 1 (Eyes, Central nervous system)
Specific target organ toxicity - single exposure : Category 3 (Central nervous system)
Specific target organ toxicity - : Category 2 (Auditory system, Eyes)

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icity - repeated exposure
(Inhalation)

Aspiration hazard : Category 1

GHS Label element

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
H304 May be fatal if swallowed and enters airways.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H336 May cause drowsiness or dizziness.
H361 Suspected of damaging fertility or the unborn child.
H370 Causes damage to organs (Eyes, Central nervous system).
H373 May cause damage to organs (Auditory system, Eyes) through prolonged or repeated exposure if inhaled.

Precautionary statements : **Prevention:**
P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P233 Keep container tightly closed.
P240 Ground/bond container and receiving equipment.
P241 Use explosion-proof electrical/ ventilating/ lighting/ equipment.
P242 Use only non-sparking tools.
P243 Take precautionary measures against static discharge.
P260 Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.
P264 Wash skin thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P271 Use only outdoors or in a well-ventilated area.
P280 Wear protective gloves/ eye protection/ face protection.

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P281 Use personal protective equipment as required.

Response:

P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/ physician.

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.

P331 Do NOT induce vomiting.

P332 + P313 If skin irritation occurs: Get medical advice/ attention.

P337 + P313 If eye irritation persists: Get medical advice/ attention.

P362 Take off contaminated clothing and wash before reuse.

P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction.

Storage:

P403 + P233 Store in a well-ventilated place. Keep container tightly closed.

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

P405 Store locked up.

Disposal:

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

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

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than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

Emergency Overview

Appearance	liquid
Colour	clear, colourless
Hazard Summary	No information available.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Hazardous components

CAS-No.	Chemical Name	Concentration (%)
108-88-3	Toluene	30 - 50
67-56-1	Methanol	20 - 30
67-64-1	Acetone	10 - 20
110-19-0	Isobutyl acetate	10 - 20
108-65-6	Glycol ether PM acetate	5 - 10

SECTION 4. FIRST AID MEASURES

- General advice : Move out of dangerous area.
Consult a physician.
Show this safety data sheet to the doctor in attendance.
Symptoms of poisoning may appear several hours later.
Do not leave the victim unattended.
- If inhaled : Call a physician or poison control centre immediately.
If unconscious place in recovery position and seek medical advice.
- 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 : Immediately flush eye(s) with plenty of water.
Remove contact lenses.
Protect unharmed eye.
Keep eye wide open while rinsing.
If eye irritation persists, consult a specialist.

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If swallowed : Keep respiratory tract clear.
Do NOT induce vomiting.
Do not give milk or alcoholic beverages.
Never give anything by mouth to an unconscious person.
Take victim immediately to hospital.

SECTION 5. FIREFIGHTING MEASURES

Suitable extinguishing media : Alcohol-resistant foam
Carbon dioxide (CO₂)
Dry chemical
Water spray

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 : 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 fire-fighting if necessary.
Use personal protective equipment.

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

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- 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 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 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 : Prevent unauthorized access. No smoking. Keep container tightly closed in a dry and well-ventilated place. 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	Control parame-	Basis
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		(Form of exposure)	ters / Permissible concentration	
108-88-3	Toluene	TWA	20 ppm	ACGIH
		TWA	100 ppm 375 mg/m ³	NIOSH REL
		ST	150 ppm 560 mg/m ³	NIOSH REL
		TWA	200 ppm	OSHA Z-2
		CEIL	300 ppm	OSHA Z-2
		Peak	500 ppm	OSHA Z-2
		TWA	100 ppm 375 mg/m ³	OSHA P0
		STEL	150 ppm 560 mg/m ³	OSHA P0
67-56-1	Methanol	TWA	200 ppm	ACGIH
		STEL	250 ppm	ACGIH
		TWA	200 ppm 260 mg/m ³	NIOSH REL
		ST	250 ppm 325 mg/m ³	NIOSH REL
		TWA	200 ppm 260 mg/m ³	OSHA Z-1
		STEL	250 ppm 325 mg/m ³	OSHA P0
		TWA	200 ppm 260 mg/m ³	OSHA P0
67-64-1	Acetone	TWA	500 ppm	ACGIH
		STEL	750 ppm	ACGIH
		TWA	250 ppm 590 mg/m ³	NIOSH REL
		TWA	1,000 ppm 2,400 mg/m ³	OSHA Z-1
		TWA	750 ppm 1,800 mg/m ³	OSHA P0
		STEL	1,000 ppm 2,400 mg/m ³	OSHA P0
110-19-0	Isobutyl acetate	TWA	150 ppm	ACGIH
		TWA	150 ppm 700 mg/m ³	NIOSH REL
		TWA	150 ppm 700 mg/m ³	OSHA Z-1
		TWA	150 ppm 700 mg/m ³	OSHA P0
108-65-6	Glycol ether PM acetate	TWA	50 ppm	US WEEL

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Biological occupational exposure limits

Components	CAS-No.	Control parameters	Biological specimen	Sampling time	Permissible concentration	Basis
Toluene	108-88-3	Toluene	In blood	Prior to last shift of work-week	0.02 mg/l	ACGIH BEI
		Toluene	Urine	End of shift (As soon as possible after exposure ceases)	0.03 mg/l	ACGIH BEI
		o-Cresol	Urine	End of shift (As soon as possible after exposure ceases)	0.3 mg/g Creatinine	ACGIH BEI
Methanol	67-56-1	Methanol	Urine	End of shift (As soon as possible after exposure ceases)	15 mg/l	ACGIH BEI
Acetone	67-64-1	Acetone	Urine	End of shift (As soon as possible after exposure ceases)	50 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

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	an approved filter.
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	: Avoid contact with skin, eyes and clothing. When using do not eat or drink. When using do not smoke. Wash hands before breaks and immediately after handling the product.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	: liquid
Colour	: clear, colourless
Odour	: No data available
Odour Threshold	: No data available
pH	: No data available
Freezing Point	: No data available
Boiling Point	: No data available
Flash point	: -20 °C (-4 °F)
Evaporation rate	: No data available
Flammability (solid, gas)	: No data available
Burning rate	: No data available
Upper explosion limit	: No data available

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Lower explosion limit	: No data available
Vapour pressure	: No data available
Relative vapour density	: No data available
Relative density	: No data available
Density	: 0.835 g/cm ³
Bulk density	: No data available
Water solubility	: No data available
Solubility in other solvents	: No data available
Partition coefficient: n-octanol/water	: No data available
Auto-ignition temperature	: No data available
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	: No hazards to be specially mentioned.
Conditions to avoid	: Keep away from heat, flame, sparks and other ignition sources.
Incompatible materials	: Acids alkalis aluminum Amines Ammonia halogens Lead nitrates Oxygen

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Peroxides
Reducing agents
sodium
Strong oxidizing agents
Zinc

Hazardous decomposition products : None known.

SECTION 11. TOXICOLOGICAL INFORMATION

Acute toxicity

Product:

Acute oral toxicity : Acute toxicity estimate : 351.96 mg/kg
Method: Calculation method

Acute inhalation toxicity : Acute toxicity estimate : 10.56 mg/l
Exposure time: 4 h
Test atmosphere: vapour
Method: Calculation method

Acute dermal toxicity : Acute toxicity estimate : 1,056 mg/kg
Method: Calculation method

Components:

108-88-3:

Acute oral toxicity : LD50 (rat, male): > 5,580 mg/kg

Acute inhalation toxicity : LC50 (rat, male and female): 28.1 mg/l
Exposure time: 4 h
Test atmosphere: vapour
Method: OECD Test Guideline 403

Acute dermal toxicity : LD50 (rabbit): > 5,000 mg/kg

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

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Assessment: The component/mixture is toxic after single contact with skin.

67-64-1:

Acute oral toxicity : LD50 (rat): 5,800 mg/kg

Acute inhalation toxicity : LC50 (rat): 76.0 mg/l
Exposure time: 4 h

Acute dermal toxicity : LD50 : > 7,426 mg/kg

110-19-0:

Acute oral toxicity : LD50 (rat): 13,413 mg/kg
Assessment: The substance or mixture has no acute oral toxicity

Acute inhalation toxicity : LC50 (rat): 23.4 mg/l
Exposure time: 4 h
Assessment: The substance or mixture has no acute inhalation toxicity
Remarks: Information given is based on data obtained from similar substances.

Acute dermal toxicity : LD50 (rabbit): > 17,400 mg/kg
Assessment: The substance or mixture has no acute dermal toxicity

108-65-6:

Acute oral toxicity : LD50 (rat): 8,532 mg/kg

Acute inhalation toxicity : Remarks: No data available

Acute dermal toxicity : LD50 (rabbit): > 5,000 mg/kg
Method: OECD Test Guideline 402

Skin corrosion/irritation

Product:

Result: Irritating to skin.

Components:

108-88-3:

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

67-56-1:

Species: rabbit

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Result: No skin irritation

67-64-1:

Species: rabbit
Exposure time: 24 h
Method: In vivo
Result: Mild skin irritation

110-19-0:

Species: rabbit
Result: No skin irritation

108-65-6:

Species: rabbit
Method: OECD Test Guideline 404
Result: No skin irritation

Serious eye damage/eye irritation

Product:

Result: Irritating to eyes.

Components:

108-88-3:

Species: rabbit
Result: Irritating to eyes.
Method: OECD Test Guideline 405

67-56-1:

Species: rabbit
Result: No eye irritation

67-64-1:

Species: rabbit
Result: Irritating to eyes.
Exposure time: 24 h

110-19-0:

Species: rabbit
Result: No eye irritation

108-65-6:

Species: rabbit
Result: No eye irritation
Method: OECD Test Guideline 405

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Respiratory or skin sensitisation

Components:

108-88-3:

Test Type: Maximisation Test (GPMT)

Species: guinea pig

Result: Did not cause sensitisation on laboratory animals.

GLP: yes

67-56-1:

Test Type: Maximisation Test (GPMT)

Species: guinea pig

Method: OECD Test Guideline 406

Result: Did not cause sensitisation on laboratory animals.

67-64-1:

Test Type: Maximization test

Species: guinea pig

Result: Did not cause sensitisation on laboratory animals.

110-19-0:

Test Type: Maximization test

Species: guinea pig

Result: Did not cause sensitisation on laboratory animals.

108-65-6:

Test Type: Maximization test

Species: guinea pig

Method: OECD Test Guideline 406

Result: Did not cause sensitisation on laboratory animals.

GLP: no

Germ cell mutagenicity

Components:

108-88-3:

- | | |
|-----------------------|--|
| 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 |
| Genotoxicity in vivo | : Test Type: Dominant lethal assay
Test species: mouse (male)
Application Route: inhalation (vapour)
Exposure time: 6 h/d, 5 d/wk for 8 wks
Dose: 0, 100, 400 ppm
Method: OECD Test Guideline 478
Result: negative |

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

67-56-1:

Genotoxicity in vitro : Test Type: DNA damage and/or repair
Metabolic activation: with and without metabolic activation
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.

67-64-1:

Genotoxicity in vitro : Test Type: Mammalian cell gene mutation assay
Test species: Mouse lymphoma cells
Metabolic activation: Without metabolic activation
Method: OECD Test Guideline 476
Result: negative

: Test Type: Ames test
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 471
Result: negative

: Test Type: Chromosome aberration test in vitro
Test species: Chinese hamster ovary (CHO)
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 473
Result: negative

Genotoxicity in vivo : Test Type: In vivo micronucleus test
Test species: mouse
Application Route: Oral
Exposure time: 13 wk
Dose: 5,000, 10,000, 20,000 ppm
Result: negative

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

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110-19-0:

Genotoxicity in vitro : Test Type: Chromosome aberration test in vitro
Test species: Chinese hamster lung fibroblasts
Metabolic activation: with and without metabolic activation
Result: negative

Genotoxicity in vivo : Test Type: In vivo micronucleus test
Test species: mouse
Application Route: Oral
Result: negative

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

108-65-6:

Genotoxicity in vitro : Test Type: DNA damage and/or repair
Test species: rat hepatocytes
Metabolic activation: Without metabolic activation
Method: OECD Test Guideline 482
Result: negative
GLP: yes

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

Carcinogenicity

Components:

108-88-3:

Species: rat, (male and female)
Application Route: inhalation (vapour)
Exposure time: 103 wks
Dose: 0, 600, 1200 ppm
Frequency of Treatment: 6.5 h/d, 5 d/wk
NOAEL: No observed adverse effect level: 1,200 ppm

Method: OECD Test Guideline 453
Result: did not display carcinogenic properties
Symptoms: Erosion of nasal epithelium
GLP: yes

Carcinogenicity - Assessment : Not classifiable as a human carcinogen.

67-56-1:

Carcinogenicity - Assessment : Not classifiable as a human carcinogen.

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67-64-1:

Species: mouse, (female)
Application Route: Dermal
Exposure time: 365 d (90%) or 424 d (100%)
Dose: 0.1ml 90(71mg) or 100% (79mg)
Frequency of Treatment: 3 times per wk
NOAEL: 79

Result: did not display carcinogenic properties

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

110-19-0:

Remarks: This information is not available.

Carcinogenicity - Assessment : No evidence of carcinogenicity in animal studies.

108-65-6:

Species: rat, (male and female)
Application Route: inhalation (vapour)
Exposure time: 2 yr
Dose: 0, 300, 1000, 3000 ppm
Frequency of Treatment: 6 hr/d, 5 d/wk
NOAEL: No observed adverse effect level: 3,000 ppm

Method: OECD Test Guideline 453
Result: did not display carcinogenic properties
GLP: yes

Carcinogenicity - Assessment : No evidence of carcinogenicity in animal studies.

Reproductive toxicity

Components:

108-88-3:

Effects on fertility : Test Type: Two-generation study
Species: rat, male and female
Application Route: Inhalation
Dose: 0, 100, 500, 2000 ppm
Frequency of Treatment: 7 days/week
General Toxicity - Parent: NOAEC: 500 ppm
General Toxicity F1: NOAEC: 500 ppm
Fertility: NOAEC: 2,000 ppm
Symptoms: Reduced maternal body weight gain. Reduced offspring weight gain.
Method: OECD Test Guideline 416
Result: Animal testing did not show any effects on

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fertility.
GLP: yes

Test Type: Fertility
Species: rat, male and female
Application Route: inhalation (vapour)
Dose: 0, 600, 1200 ppm
Frequency of Treatment: 7 days/week
General Toxicity - Parent: NOAEC: 600 ppm
Symptoms: Decreased sperm count
Result: Animal testing did not show any effects on fertility.

Effects on foetal development

: Species: rat
Application Route: inhalation (vapour)
Dose: 0, 250, 750, 1500, 3000 ppm
Duration of Single Treatment: 10 d
Frequency of Treatment: 6 hr/day
General Toxicity Maternal: NOAEC: 750 ppm
Developmental Toxicity: NOAEC: 750 ppm
Symptoms: Maternal toxicity, Reduced body weight, Skeletal malformations.
GLP: yes

Reproductive toxicity - Assessment

: Some evidence of adverse effects on sexual function and fertility, and/or on development, based on animal experiments.

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.

67-64-1:

Effects on fertility

: Species: rat, male
Application Route: oral
Dose: 0, 5000, 10000 mg/L
Frequency of Treatment: 7 days/week

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	General Toxicity - Parent: LOAEL: 10,000 Fertility: 10,000
Effects on foetal development	: Species: rat Application Route: Inhalation Dose: 0, 440, 2200, 11000 ppm Frequency of Treatment: 7 days/week General Toxicity Maternal: NOAEC: 2,200 ppm Teratogenicity: NOAEC: 11,000 ppm Embryo-foetal toxicity.: NOAEC: 2,200 ppm Method: OECD Test Guideline 414 Result: No teratogenic potential. GLP: No data available
Reproductive toxicity - Assessment	: No evidence of adverse effects on sexual function and fertility, and on development, based on animal experiments.
110-19-0: Effects on fertility	: Test Type: Two-generation study Species: rat Application Route: Inhalation Duration of Single Treatment: 6 h Frequency of Treatment: 7 days/week General Toxicity - Parent: NOAEL: 2,500 ppm Method: OECD Test Guideline 416
Reproductive toxicity - Assessment	: No evidence of adverse effects on sexual function and fertility, and on development, based on animal experiments.
108-65-6: Effects on fertility	: Species: rat Application Route: Oral Dose: 0, 100, 300, 1000 mg/kg General Toxicity - Parent: NOAEL: 1,000 mg/kg bw General Toxicity F1: NOAEL: 1,000 mg/kg bw Method: OECD Test Guideline 422 Result: Animal testing did not show any effects on fertility. GLP: yes Remarks: Information given is based on data obtained from similar substances.
Effects on foetal development	: Species: rat Application Route: Inhalation Dose: 0, 500, 2000, 4000 ppm Duration of Single Treatment: 9 d Frequency of Treatment: 6 hr/day General Toxicity Maternal: NOAEL: 500 ppm

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Teratogenicity: NOAEL: > 4,000 ppm
GLP: yes

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

STOT - single exposure

Product: No data available

Components:

108-88-3:

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.	

67-56-1:

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

67-64-1:

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.	

110-19-0:

Exposure routes:	Target Organs:	Assessment:	Remarks:

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Inhalation	Central nervous system	The substance or mixture is classified as specific target organ toxicant, single exposure, category 3 with narcotic effects., May cause drowsiness or dizziness.	
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108-65-6:No data available

STOT - repeated exposure

Product:No data available

Components:

108-88-3:

Exposure routes:	Target Organs:	Assessment:	Remarks:
Inhalation	Auditory system, Eyes	May cause damage to organs through prolonged or repeated exposure., The substance or mixture is classified as specific target organ toxicant, repeated exposure, category 2.	

67-56-1:No data available

67-64-1:No data available

110-19-0:No data available

108-65-6:No data available

Repeated dose toxicity

Components:

108-88-3:

Species: rat, male and female

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NOAEL: 300
Application Route: inhalation (vapour)
Exposure time: 6, 12, or 18 mths
Number of exposures: 6 h/d, 5 d/wk
Dose: 0, 30, 100, 300 ppm
Method: OECD Test Guideline 453

Repeated dose toxicity - : Causes skin irritation.
Assessment

67-56-1:

Species: mouse, male and female
NOAEL: 1.3 mg/l
Application Route: Inhalation
Exposure time: 12 mths
Number of exposures: Continuous
Dose: 0, 0.013, 0.13, 1.3 mg/L

67-64-1:

Species: mouse, male
NOAEL: 20000
Application Route: Oral
Exposure time: 13 wk
Number of exposures: daily
Dose: 1250, 2500, 5000, 10000, 20000
Method: OECD Test Guideline 408
GLP: No data available

Species: mouse, female
NOAEL: 20000
LOAEL: 50000
Application Route: Oral
Exposure time: 13 wk
Number of exposures: daily
Dose: 2500, 5000, 10000, 20000, 5000
Method: OECD Test Guideline 408
GLP: No data available

Repeated dose toxicity - : Causes mild skin irritation., Causes serious eye irrita-
Assessment tion.

110-19-0:

Species: rat
NOAEL: 316 mg/kg
Application Route: Oral
Exposure time: 92 d

108-65-6:

Species: rat, male and female
NOAEL: > 1,000 mg/kg

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Application Route: Oral
Dose: 0, 100, 300, 1000 mg/kg
Method: OECD Test Guideline 422

Aspiration toxicity

Product:

May be fatal if swallowed and enters airways.

Components:

108-88-3:

Aspiration Toxicity - Category 1

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:

108-88-3:

- | | |
|---|---|
| Toxicity to fish | : LC50 (Oncorhynchus mykiss (rainbow trout)): 5.5 mg/l
Exposure time: 96 h
Test Type: flow-through test |
| Toxicity to daphnia and other aquatic invertebrates | : EC50 (Ceriodaphnia dubia): 3.78 mg/l
Exposure time: 48 h
Test Type: Renewal |
| Toxicity to algae | : EC50 (Chlorella vulgaris (Fresh water algae)): 134 mg/l
Exposure time: 3 h
Test Type: static test |
| Toxicity to bacteria | : IC50 (Bacteria): 84 mg/l
Exposure time: 24 h
Test Type: Static |

Ecotoxicology Assessment

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Acute aquatic toxicity	: Toxic to aquatic life.
Chronic aquatic toxicity	: Toxic to aquatic life with long lasting effects.
67-56-1:	
Toxicity to fish	: LC50 (Lepomis macrochirus (Bluegill sunfish)): 15,400 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: 48 h Test Type: static test
Toxicity to algae	: EC50 (Scenedesmus capricornutum (fresh water algae)): 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
67-64-1:	
Toxicity to fish	: LC50 (Oncorhynchus mykiss (rainbow trout)): 6,100 mg/l Exposure time: 48 h
Toxicity to daphnia and other aquatic invertebrates	: EC50 (Daphnia magna (Water flea)): 7,630 mg/l Exposure time: 48 h Test substance: Acetone
Toxicity to algae	: Remarks: No data available
110-19-0:	
Toxicity to fish	: LC50 (Oryzias latipes (Japanese medaka)): 17 mg/l Exposure time: 96 h
Toxicity to daphnia and other aquatic invertebrates	: (Daphnia magna (Water flea)): 25 mg/l Exposure time: 48 h Test Type: static test
Toxicity to algae	: EC50 (Pseudokirchneriella subcapitata): 370 mg/l Exposure time: 72 h Test Type: static test

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Ecotoxicology Assessment
Acute aquatic toxicity : This product has no known ecotoxicological effects.

Chronic aquatic toxicity : This product has no known ecotoxicological effects.

108-65-6:

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): > 100 mg/l
Exposure time: 96 h
Test Type: static test
Method: OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 500 mg/l
Exposure time: 48 h
Test Type: Immobilization

Toxicity to algae : EC50 (Selenastrum capricornutum (green algae)): > 1,000 mg/l
End point: Growth rate
Exposure time: 96 h
Test Type: static test

Persistence and degradability

Components:

108-88-3:

Biodegradability : Inoculum: Sewage
Biodegradation: 100 %
Remarks: Readily biodegradable

67-56-1:

Biodegradability : aerobic
Result: Readily biodegradable.
Biodegradation: 72 %
Remarks: Readily biodegradable

Biochemical Oxygen Demand (BOD) : 600 - 1,120 mg/g

Chemical Oxygen Demand (COD) : 1,420 mg/g

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

Stability in water : Hydrolysis: 91 % at 19 °C (72 h)
Remarks: Hydrolyses on contact with water.
Hydrolyses readily.

67-64-1:

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Biodegradability : Remarks: Readily biodegradable

110-19-0:

Biodegradability : aerobic
Inoculum: Sewage
Result: Readily biodegradable.
Biodegradation: 81 %
Exposure time: 20 d

108-65-6:

Biodegradability : aerobic
Inoculum: activated sludge
Concentration: 76.4 mg/l
Result: Readily biodegradable.
Biodegradation: 90 %
Exposure time: 28 d
GLP: yes

Biochemical Oxygen Demand (BOD) : 0.36 mg/l

Chemical Oxygen Demand (COD) : 1.74 mg/l

Bioaccumulative potential

Components:

108-88-3:

Partition coefficient: n-octanol/water : log Pow: 2.73

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

67-64-1:

Partition coefficient: n-octanol/water : log Pow: -0.24

110-19-0:

Partition coefficient: n-octanol/water : log Pow: 1.78

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octanol/water

108-65-6:

Partition coefficient: n-octanol/water : log Pow: 0.43

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 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	: An environmental hazard cannot be excluded in the event of unprofessional handling or disposal., Toxic 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. 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): UN1992, FLAMMABLE LIQUID, TOXIC, N.O.S., (TOLUENE, METHANOL) , 3 (6.1), II, Flash Point:-20 °C(-4 °F)

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IMDG (International Maritime Dangerous Goods): UN1992, FLAMMABLE LIQUID, TOXIC, N.O.S., (TOLUENE, METHANOL), 3, (6.1), II, Marine Pollutant (TOLUENE)

DOT (Department of Transportation): UN1992, Flammable liquids, toxic, n.o.s., (TOLUENE, METHANOL), 3 (6.1), II

SECTION 15. REGULATORY INFORMATION

OSHA Hazards : Flammable liquid, Moderate skin irritant, Moderate eye irritant, Reproductive hazard, Harmful by ingestion., Harmful by skin absorption., Harmful by inhalation., Specific target organ toxicity - single exposure, Specific target organ toxicity - repeated exposure, Aspiration hazard

WHMIS Classification : B2: Flammable liquid
 D1B: Toxic Material Causing Immediate and Serious Toxic Effects
 D2A: Very Toxic Material Causing Other 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)
Toluene	108-88-3	1000	3204

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
 Chronic 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:

108-88-3	Toluene	31.2138 %
67-56-1	Methanol	28.4109 %

Clean Air Act

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

108-88-3	Toluene	31.2138 %
67-56-1	Methanol	28.4109 %
71-43-2	Benzene	0.0321 %
100-41-4	Ethylbenzene	0.0311 %
98-82-8	Cumene	0.0001 %

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):

108-88-3	Toluene	31.2138 %
67-56-1	Methanol	28.4109 %
67-64-1	Acetone	18.9399 %
110-19-0	Isobutyl acetate	15.6306 %
71-43-2	Benzene	0.0321 %
100-41-4	Ethylbenzene	0.0311 %
98-82-8	Cumene	0.0001 %

Clean Water Act

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

108-88-3	Toluene	31.2138 %
110-19-0	Isobutyl acetate	15.6306 %
71-43-2	Benzene	0.0321 %
100-41-4	Ethylbenzene	0.0311 %

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

108-88-3	Toluene	31.2138 %
71-43-2	Benzene	0.0321 %
100-41-4	Ethylbenzene	0.0311 %

This product contains the following toxic pollutants listed under the U.S. Clean Water Act Section 307

108-88-3	Toluene	31.2138 %
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US State Regulations

Massachusetts Right To Know

108-88-3	Toluene	30 - 50 %
67-56-1	Methanol	20 - 30 %
67-64-1	Acetone	10 - 20 %
110-19-0	Isobutyl acetate	10 - 20 %
71-43-2	Benzene	0 - 0.1 %

Pennsylvania Right To Know

108-88-3	Toluene	30 - 50 %
67-56-1	Methanol	20 - 30 %
67-64-1	Acetone	10 - 20 %
110-19-0	Isobutyl acetate	10 - 20 %
108-65-6	Glycol ether PM acetate	5 - 10 %

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71-43-2	Benzene	0 - 0.1 %
100-41-4	Ethylbenzene	0 - 0.1 %

New Jersey Right To Know

108-88-3	Toluene	30 - 50 %
67-56-1	Methanol	20 - 30 %
67-64-1	Acetone	10 - 20 %
110-19-0	Isobutyl acetate	10 - 20 %
108-65-6	Glycol ether PM acetate	5 - 10 %

California Prop 65

	WARNING! This product contains a chemical known to the State of California to cause cancer.
71-43-2	Benzene
100-41-4	Ethylbenzene
98-82-8	Cumene
	WARNING: This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.
108-88-3	Toluene
67-56-1	Methanol
71-43-2	Benzene

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

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	:	n (Negative listing) (Not 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)

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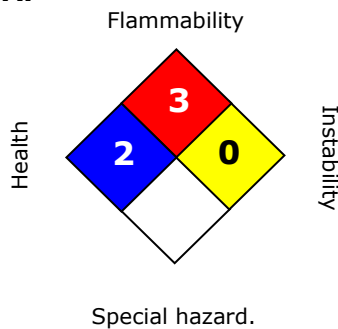
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		with the inventory)
Philippines Inventory of Chemicals and Chemical Substances (PICCS)	:	y (positive listing) (On the inventory, or in compliance with the inventory)
China. Inventory of Existing Chemical Substances in China (IECSC)	:	y (positive listing) (On the inventory, or in compliance with the inventory)

SECTION 16. OTHER INFORMATION **Further information**

NFPA:



HMIS III:

HEALTH	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 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™ Solutions EHS Product Safety Department (1-855-429-2661) MSDS@nexeosolutions.com.

Legacy MSDS: 000000210740

Material number:
16006062, 16005908, 16005907

Key or legend to abbreviations and acronyms used in the safety data sheet			
ACGIH	American Conference of Government Industrial Hygienists	LD50	Lethal Dose 50%

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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%