



Safety Data Sheet

PRO X Premium Brake Cleaner

Version 1.0

Revision Date: 02/25/2015

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product Names : Brake & Parts Cleaner, MaxPro Brake Cleaner NC
Product Use Description : Brake Parts Cleaner

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: 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

Carcinogenicity : Category 2

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)

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Specific target organ toxicity - repeated exposure (Inhalation) : Category 2 (Auditory system, Eyes)

Aspiration hazard : Category 1

GHS Label element

Hazard pictograms :



Signal word : Danger

Hazard statements : H225 Highly flammable liquid and vapor.
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.
H351 Suspected of causing cancer.
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/ vapors/ spray.
P264 Wash skin thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.



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P271 Use only outdoors or in a well-ventilated area. P280 Wear protective gloves/ eye protection/ face protection.

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

Group 2B: Possibly carcinogenic to humans

64742-49-0 Naphtha (pet), hydrotreated
It

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

100-41-4 Ethylbenzene



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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

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

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Hazardous components

CAS-No.	Chemical Name	Concentration (%)
426260-76-6	Heptane, branched, cyclic and linear	0 - 50
64742-49-0	Naphtha (pet), hydrotreated lt	0 - 50
108-88-3	Toluene	30 - 50
67-56-1	Methanol	20 - 30
64742-89-8	Solvent naphtha (pet), lt aliph.	0 - 30
142-82-5	Heptane	0 - 20
110-82-7	Cyclohexane	0 - 5
100-41-4	Ethylbenzene	0 - 1
110-54-3	Hexane	0 - 1

Special Notes: : Functionally equivalent petroleum streams may be found in this preparation at varying concentrations.

SECTION 4. FIRST AID MEASURES

General advice : Move out of dangerous area.
Consult a physician.



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	<p>Show this safety data sheet to the doctor in attendance. Symptoms of poisoning may appear several hours later. Do not leave the victim unattended.</p>
If inhaled	<p>: Consult a physician after significant exposure. If unconscious place in recovery position and seek medical advice.</p>
In case of skin contact	<p>: Take victim immediately to hospital. If on skin, rinse well with water. If on clothes, remove clothes.</p>
In case of eye contact	<p>: 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.</p>
If swallowed	<p>: Keep respiratory tract clear. Do NOT induce vomiting. Do not give milk or alcoholic beverages. Never give anything by mouth to an unconscious person. If symptoms persist, call a physician. Take victim immediately to hospital.</p>

SECTION 5. FIREFIGHTING MEASURES

Suitable extinguishing media	<p>: Alcohol-resistant foam Carbon dioxide (CO₂) Dry chemical</p>
Unsuitable extinguishing media	<p>: High volume water jet</p>
Specific hazards during firefighting	<p>: Do not allow run-off from fire fighting to enter drains or water courses.</p>
Hazardous combustion products	<p>: No hazardous combustion products are known</p>
Specific extinguishing methods	<p>: Use a water spray to cool fully closed containers.</p>
Further information	<p>: Collect contaminated fire extinguishing water separately. This must not be discharged into drains.</p>



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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.

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 vapors accumulating to form explosive concentrations. Vapors 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.



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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 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
426260-76-6	Heptane, branched, cyclic and linear	TWA	400 ppm	ACGIH
		STEL	500 ppm	ACGIH
64742-49-0	Naphtha (pet), hydro-treated It	TWA	500 ppm 2,000 mg/m3	OSHA Z-1
		TWA	400 ppm 1,600 mg/m3	OSHA P0
108-88-3	Toluene	TWA	20 ppm	ACGIH
		TWA	100 ppm 375 mg/m3	NIOSH REL
		ST	150 ppm 560 mg/m3	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/m3	OSHA P0
		STEL	150 ppm 560 mg/m3	OSHA P0
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	OSHA P0



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			325 mg/m ³	
		TWA	200 ppm 260 mg/m ³	OSHA P0
64742-89-8	Solvent naphtha (pet), lt aliph.	TWA	500 ppm 2,000 mg/m ³	OSHA Z-1
		TWA	400 ppm 1,600 mg/m ³	OSHA P0
142-82-5	Heptane	TWA	85 ppm 350 mg/m ³	NIOSH REL
		C	440 ppm 1,800 mg/m ³	NIOSH REL
		TWA	500 ppm 2,000 mg/m ³	OSHA Z-1
		TWA	400 ppm 1,600 mg/m ³	OSHA P0
		STEL	500 ppm 2,000 mg/m ³	OSHA P0
110-82-7	Cyclohexane	TWA	100 ppm	ACGIH
		TWA	300 ppm 1,050 mg/m ³	NIOSH REL
		TWA	300 ppm 1,050 mg/m ³	OSHA Z-1
		TWA	300 ppm 1,050 mg/m ³	OSHA P0
100-41-4	Ethylbenzene	TWA	20 ppm	ACGIH
		STEL	125 ppm	ACGIH
		TWA	100 ppm 435 mg/m ³	NIOSH REL
		ST	125 ppm 545 mg/m ³	NIOSH REL
		TWA	100 ppm 435 mg/m ³	OSHA Z-1
		TWA	100 ppm 435 mg/m ³	OSHA P0
		STEL	125 ppm 545 mg/m ³	OSHA P0
110-54-3	Hexane	TWA	50 ppm	ACGIH
		TWA	50 ppm 180 mg/m ³	NIOSH REL
		TWA	500 ppm 1,800 mg/m ³	OSHA Z-1
		TWA	50 ppm 180 mg/m ³	OSHA P0

Biological occupational exposure limits

Components	CAS-No.	Control parameters	Biological specimen	Sampling time	Permissible concentration	Basis
Toluene	108-88-	Toluene	In blood	Prior to	0.02 mg/l	ACGIH



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	3			last shift of work-week		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
Ethylbenzene	100-41-4	Sum of mandelic acid and phenyl glyoxylic acid	Urine	End of shift at end of work-week	0.7 g/g creatinine	ACGIH BEI
Hexane	110-54-3	2,5-Hexanedione	In urine	End of shift at end of work-week	0.4 mg/l	ACGIH BEI
Remarks:	Without hydrolysis					

Personal protective equipment

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



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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	: petroleum distillates
Odour Threshold	: No data available
pH	: No data available
Freezing Point	: No data available
Boiling Point	: No data available
Flash point	: -9 °C (16 °F)
Evaporation rate	: No data available
Flammability (solid, gas)	: No data available
Burning rate	: No data available
Upper explosion limit	: No data available
Lower explosion limit	: No data available



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Vapor pressure	: No data available
Relative vapor density	: No data available
Relative density	: 0.757 @ 20 °C (68 °F)
Density	: 0.757 g/cm ³ @ 20 °C (68 °F)
Bulk density	: No data available
Water solubility	: No data available
Solubility in other sol- vents	: 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	: Extremes of temperature and direct sunlight. Heat, flames and sparks.
Incompatible materials	: halogens Oxygen peroxides Strong oxidizing agents



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SECTION 11. TOXICOLOGICAL INFORMATION

Acute toxicity

Product:

Acute oral toxicity : Acute toxicity estimate : 395.53 mg/kg
Method: Calculation method

Acute inhalation toxicity : Acute toxicity estimate : 12.05 mg/l
Exposure time: 4 h
Test atmosphere: vapor
Method: Calculation method

Acute dermal toxicity : Acute toxicity estimate : 1,205 mg/kg
Method: Calculation method

Components:

426260-76-6:

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: vapor
Method: OECD Test Guideline 403
Remarks: Information given is based on data obtained from similar substances.

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.

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



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

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

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: vapor
Method: OECD Test Guideline 403

Acute dermal toxicity : LD50 (rabbit, male and female): > 2,000 mg/kg
Method: OECD Test Guideline 402
GLP: yes



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

110-82-7:

- Acute oral toxicity : LD50 (rat): > 5,000 mg/kg
Assessment: The substance or mixture has no acute oral toxicity
- Acute inhalation toxicity : LC50 (rat): > 5540 ppm
Exposure time: 4 h
Test atmosphere: vapor
Method: OECD Test Guideline 403
GLP: yes
Assessment: The component/mixture is low toxic after short term inhalation.
- Acute dermal toxicity : LD50 (rabbit): > 2,000 mg/kg
Assessment: The component/mixture is low toxic after single contact with skin.

100-41-4:

- Acute inhalation toxicity : LC50 (Mouse, Male): 10 mg/l
Exposure time: 4 h
Assessment: The component/mixture is moderately toxic after short term inhalation.
- Acute dermal toxicity : LD50 (rabbit): 15,433 mg/kg

110-54-3:

- Acute oral toxicity : LD50 (rat): 16,000 mg/kg
Assessment: The substance or mixture has no acute oral toxicity
- Acute inhalation toxicity : LC50 (rat): > 31.86 mg/l
Exposure time: 4 h
Test atmosphere: vapor
Assessment: The substance or mixture has no acute inhalation toxicity
- Acute dermal toxicity : LD50 (rabbit): > 2,000 mg/kg
Assessment: The component/mixture is low toxic after single contact with skin.

Skin corrosion/irritation

Product:

Remarks: May cause skin irritation in susceptible persons.

Components:



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426260-76-6:

Species: rabbit

Exposure time: 24 h

Method: OECD Test Guideline

404 Result: Irritating to skin.

GLP: yes

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

64742-49-0:

Species: rabbit

Result: Irritating to skin.

108-88-3:

Species: rabbit

Exposure time: 4 h

Result: Irritating to skin.

67-56-1:

Species: rabbit

Result: No skin irritation

64742-89-8:

Species: rabbit

Exposure time: 4 h

Result: Irritating to skin.

142-82-5:

Species: rabbit

Exposure time: 24 h

Method: OECD Test Guideline

404 Result: Irritating to skin.

GLP: yes

Remarks: Based on a similar product formulation.

110-82-7:

Species: rabbit

Result: Irritating to skin.

100-41-4:

Species: rabbit

Result: Mild skin irritation

110-54-3:

Species: rabbit

Result: Irritating to skin.

Serious eye damage/eye irritation

Product:

Remarks: Irritating to eyes.



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Components:

426260-76-6:

Species: rabbit

Result: Irritating to eyes.

Method: OECD Test Guideline

405 GLP: yes

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

64742-49-0:

Species: rabbit

Result: Irritating to eyes.

108-88-3:

Species: rabbit

Result: Irritating to eyes. Method:

OECD Test Guideline 405

67-56-1:

Species: rabbit

Result: No eye irritation

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.

110-82-7:

Species: rabbit

Result: Mild eye irritation

100-41-4:

Species: rabbit

Result: Mild eye irritation

110-54-3:

Species: rabbit

Result: Irritating to eyes.

Respiratory or skin sensitisation

Components:

426260-76-6:

Test Type: Maximization test



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Species: guinea pig
Method: OECD Test Guideline 406
Result: Did not cause sensitisation on laboratory animals.
Remarks: Based on a similar product formulation.

64742-49-0:

Test Type: Buehler Test
Species: guinea pig
Result: Did not cause sensitisation on laboratory animals.

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.

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.

110-82-7:

Test Type: Buehler Test
Species: guinea pig
Result: Did not cause sensitisation on laboratory animals.

100-41-4:

Remarks: No data available

110-54-3:

Test Type: lymph node
assay Species: mouse
Result: Did not cause sensitisation on laboratory animals.

Germ cell mutagenicity

Components:



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426260-76-6:

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

: Test Type: Ames test
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 471
Result: negative
Remarks: Information given is based on data obtained from similar substances.

Germ cell mutagenicity-Assessment

: Did not show mutagenic effects in animal experiments.

64742-49-0:

Germ cell mutagenicity-Assessment

: Mutagenicity classification not possible from current data

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 (vapor)
Exposure time: 6 h/d, 5 d/wk for 8 wks
Dose: 0, 100, 400 ppm
Method: OECD Test Guideline 478
Result: negative

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



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	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.
64742-89-8: 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 activation Method: OECD Test Guideline 471 Result: negative
Germ cell mutagenicity-Assessment	: Did not show mutagenic effects in animal experiments.
110-82-7: Genotoxicity in vitro	: Test Type: Mammalian cell gene mutation assay Metabolic activation: with and without metabolic activation Result: negative
Genotoxicity in vivo	: Test Type: Chromosome aberration assay in vivo Test species: rat Cell type: Bone marrow Application Route: inhalation (vapor) Exposure time: 6 h/d, 5 d Result: negative
Germ cell mutagenicity-Assessment	: Tests on bacterial or mammalian cell cultures did not show mutagenic effects.
100-41-4: Genotoxicity in vitro	: Test Type: Chromosome aberration test in vitro Test species: Chinese hamster ovary (CHO) Metabolic activation: with and without metabolic activation



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vation
Method: OECD Test Guideline 473
Result: negative
GLP: no

: 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: yes

Genotoxicity in vivo

: Test Type: In vivo micronucleus test
Test species: mouse (male)
Application Route: Oral
Method: OECD Test Guideline 474
Result: negative
GLP: yes

Test Type: DNA damage and/or repair
Test species: mouse (male and female)
Application Route: Inhalation
Method: OECD Test Guideline 486
Result: negative
GLP: yes

Germ cell mutagenicity-Assessment

: In vivo tests did not show mutagenic effects

110-54-3:

Genotoxicity in vitro

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

Genotoxicity in vivo

: Test Type: Dominant lethal assay
Test species: mouse (male)
Application Route: inhalation (vapor)
Exposure time: 6/d, 5/wk for 8 wks
Result: negative

Germ cell mutagenicity-Assessment

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

Carcinogenicity

Components:

426260-76-6:



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Remarks: This information is not available.

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

64742-49-0:

Carcinogenicity - Assessment : Not classifiable as a human carcinogen.

108-88-3:

Species: rat, (male and female)

Application Route: inhalation (vapor)

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 : Suspected human carcinogens

64742-89-8:

Carcinogenicity - Assessment : Not classifiable as a human carcinogen.

142-82-5:

Remarks: This information is not available.

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

110-82-7:

Species: mouse

Application Route:

Dermal Exposure time:

45 wks Dose: 100 ul

Frequency of Treatment: 3 times/wk

Result: Weak tumor promoter

Carcinogenicity - Assessment : Not classifiable as a human carcinogen.



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100-41-4:

Species: mouse, (male and female)
Application Route: Inhalation
Exposure time: 103 wk
Activity duration: 6 h Dose:
0, 75, 250, 750 ppm
Frequency of Treatment: 5 days/week
NOAEL: 250 ppm

Method: OECD Test Guideline 453 Result:
evidence of carcinogenic activity

Symptoms: increased incidences of alveolar/bronchiolar neoplasms, increase
inci-dence of hepatocellular carcinomas
GLP: yes

Carcinogenicity - As- : Suspected human carcinogens
sessment

110-54-3:

Species: rat
Application Route: inhalation (vapor)
Exposure time: 2 yrs
Frequency of Treatment: 5 days/week
NOAEL: 9,000 ppm

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

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

Carcinogenicity - As- : No evidence of carcinogenicity in animal studies.
sessment

Reproductive toxicity

Components:

426260-76-6:

Effects on fertility : Test Type: Two-generation study Species:
rat, male and female Application
Route: vapor
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
Symptoms: Reduced foetal weight.
Method: OECD Test Guideline 416
Result: No reproductive effects.
GLP: yes
Remarks: Information given is based on data
obtained from similar substances.



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Effects on foetal development

: Species: mouse
Application Route: vapor
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.
Did not show teratogenic effects in animal experiments.

64742-49-0:

Reproductive toxicity - Assessment

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

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 fertility.
GLP: yes

Test Type: Fertility
Species: rat, male and female
Application Route: inhalation (vapor)
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



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opment

Application Route: inhalation (vapor)
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.

Effects on foetal devel-
opment

: Species: rat
Application Route: inhalation (vapor)
Dose: 0, 6.65, 13.3, 26.6 mg/L
Duration of Single Treatment: 20 d
Frequency of Treatment: 7 hr/day
General Toxicity Maternal: NOAEC: 13.3 mg/L
Teratogenicity: NOAEC: 6.65 mg/L
Result: Teratogenic effects.

Reproductive toxicity -
Assessment

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

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
Species: rat, male and female
Application Route: vapor
Dose: 0, 900, 3000, 9000 ppm
Frequency of Treatment: 5 days/week



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	<p>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. Reduced 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.</p>
Effects on foetal development	<p>: Species: mouse Application Route: inhalation (vapor) 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.</p>
Reproductive toxicity - Assessment	<p>: Animal testing did not show any effects on fertility. Embryotoxicity classification not possible from current data.</p>
110-82-7: Effects on fertility	<p>: Test Type: Two-generation study Species: rat Application Route: vapor Frequency of Treatment: 5 days/week General Toxicity - Parent: NOAEC: 500 ppm</p>
Effects on foetal development	<p>: Test Type: Fertility/early embryonic development Species: rat Application Route: vapor Duration of Single Treatment: 10 d Developmental Toxicity: NOAEC: 7,000 ppm Method: OECD Test Guideline 414 GLP: yes</p>
Reproductive toxicity - Assessment	<p>: No evidence of adverse effects on sexual function and fertility, and on development, based on animal experiments.</p>
100-41-4: Effects on fertility	<p>: Test Type: One generation study Species: rat, male and female Application Route: Inhalation</p>



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Dose: 0, 100, 500 and 1000 ppm
Duration of Single Treatment: 6 h
General Toxicity - Parent: NOAEC: 1,000 ppm
General Toxicity F1: NOAEC: 100 ppm
Symptoms: Reduced fetal weight. Reduced offspring weight gain.
Method: OECD Test Guideline 415
Result: No reproductive effects.
GLP: yes

Effects on foetal development

: Species: rat
Application Route: Inhalation
Dose: 0, 100, 500, 1000, 2000 ppm
Duration of Single Treatment: 15 d
General Toxicity Maternal: NOAEC: 500 ppm
Teratogenicity: NOAEC: 2,000 ppm
Developmental Toxicity: NOAEC: 500 ppm
Symptoms: Reduced body weight
Method: OECD Test Guideline 414
Result: Developmental toxicity occurred at maternal toxicity dose levels
GLP: No data available

Reproductive toxicity - Assessment

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

110-54-3:

Effects on fertility

: Species: rat, male
Application Route: inhalation (vapor)
Frequency of Treatment: 6 days/week
General Toxicity - Parent: LOAEL: 5,000 ppm
Symptoms: Testicular effects

Effects on foetal development

: Test Type: Fertility/early embryonic development
Species: mouse
Application Route: inhalation (vapor)
Duration of Single Treatment: 12 d
Developmental Toxicity: LOAEC: 200 ppm

Reproductive toxicity - Assessment

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

STOT - single exposure

Product: No data available

Components:

426260-76-6:

Exposure routes:	Target Organs:	Assessment:	Remarks:
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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.	
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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.	

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.	

64742-89-8: No data available



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142-82-5:

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.	

110-82-7:

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.	

100-41-4: No data available

110-54-3:

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.	

STOT - repeated exposure

Product: No data available

Components:

426260-76-6: No data available

64742-49-0: No data available



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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

64742-89-8:No data available

142-82-5:No data available

110-82-7:No data available

100-41-4:

Exposure routes:	Target Organs:	Assessment:	Remarks:
	Auditory system	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.	

110-54-3:

Exposure routes:	Target Organs:	Assessment:	Remarks:
Inhalation	Central nervous	May cause damage	



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	system	to organs through prolonged or repeated exposure., The substance or mixture is classified as specific target organ toxicant, repeated exposure, category 2.	
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Repeated dose toxicity

Components:

426260-76-6:

Species: rat, male

NOAEL: 12470 mg/m³

Application Route: inhalation (vapor)

Exposure time: 16 wks

Number of exposures: 12 h/d, 7

d/wk Dose: 0, 12470 mg/m³

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

Repeated dose toxicity - : Causes skin irritation.
Assessment

108-88-3:

Species: rat, male and
female NOAEL: 300

Application Route: inhalation (vapor)

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

64742-89-8:

Species: rat, male and
female NOAEL: 1402

Application Route: inhalation (vapor)

Test atmosphere: vapor



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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 (vapor)
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

110-82-7:

Species: rat
NOAEL: 7000 ppm
Application Route: inhalation (vapor)
Exposure time: 90 d
Number of exposures: 6 h/d, 5 d/wk

100-41-4:

Species: rat, male and
female NOAEL: 75 mg/kg
Application Route: Oral
Exposure time: 28 d
Dose: 75, 250 and 750 mg/kg
bw/day Method: OECD Test Guideline
407 GLP: yes
Symptoms: Increased kidney and liver weights

110-54-3:

Species: rat
NOAEL: 568 mg/kg
Application Route: Oral
Exposure time: 120 d Number
of exposures: 5 d/wk

Aspiration toxicity

Components:

426260-76-6:

Aspiration Toxicity - Category 1

64742-49-0:

May be fatal if swallowed and enters airways.



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108-88-3:

Aspiration Toxicity - Category 1

64742-89-8:

May be fatal if swallowed and enters airways.

142-82-5:

Aspiration Toxicity - Category 1

110-82-7:

May be fatal if swallowed and enters airways.

100-41-4:

May be fatal if swallowed and enters airways.

110-54-3:

May be fatal 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:

426260-76-6:

Toxicity to fish : LC50 (Carassius auratus (goldfish)): 4 mg/l
Exposure time: 24 h
Remarks: Information given is based on data obtained from similar substances.

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 1.5 mg/l
Exposure time: 48 h
Test Type: static test
Remarks: Information given is based on data on the components and the ecotoxicology of similar products.

Toxicity to algae : Remarks: No data available

Ecotoxicology Assessment



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Acute aquatic toxicity : Very toxic to aquatic life.

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

64742-49-0:

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 10 mg/l
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : 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.

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

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



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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

64742-89-8:

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 invertebrates : 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 invertebrates : EC50 (Daphnia magna (Water flea)): 1.5 mg/l
Exposure time: 48 h
Test Type: static test
Remarks: Very toxic to aquatic organisms.



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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.

110-82-7:

Toxicity to fish : LC50 (Fathead minnow (*Pimephales promelas*)): 4.53 mg/l
Exposure time: 96 h
Test Type: flow-through test

Toxicity to daphnia and other aquatic invertebrates : EC50 (*Daphnia magna* (Water flea)): 0.9 mg/l
Exposure time: 48 h
Test Type: static test

Toxicity to algae : EC50 (*Selenastrum capricornutum* (green algae)): 3.4 mg/l
End point: Biomass
Exposure time: 72 h

M-Factor (Acute aquatic toxicity) : 1

Ecotoxicology Assessment

Acute aquatic toxicity : Very toxic to aquatic life.

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

100-41-4:

Toxicity to fish : LC50 (*Oncorhynchus mykiss* (rainbow trout)): 4.2 mg/l
Exposure time: 96 h
Test Type: semi-static test

Toxicity to daphnia and other aquatic invertebrates : EC50 (*Daphnia magna* (Water flea)): 1.8 mg/l
Exposure time: 48 h
Test Type: static test

Toxicity to algae : EC50 (*Pseudokirchneriella subcapitata*): 5.4 mg/l
Exposure time: 72 h
Test Type: static test

Toxicity to bacteria : Remarks: No data available

Ecotoxicology Assessment

Acute aquatic toxicity : Toxic to aquatic life.

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



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110-54-3:

Toxicity to fish : LC50 (Pimephales promelas (fathead minnow)): 2.5 mg/l
Exposure time: 96 h
Test Type: flow-through test

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 2.1 mg/l
Exposure time: 48 h

Toxicity to algae : EbL50 (Pseudokirchneriella subcapitata (green algae)): 26 mg/l
End point: Biomass
Exposure time: 72 h
Test Type: static test
Analytical monitoring: no
Method: OECD Test Guideline 201
GLP: yes

Ecotoxicology Assessment
Acute aquatic toxicity : Toxic to aquatic life.

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

Persistence and degradability

Components:

64742-49-0:

Biodegradability : aerobic
Inoculum: activated sludge
Concentration: 20 mg/l
Biodegradation: 74.30 %
Exposure time: 56 d
GLP: yes
Remarks: Inherently biodegradable.

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 De- : 600 - 1,120 mg/g



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mand (BOD)

Chemical Oxygen De-
mand (COD) : 1,420 mg/g

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

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

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

110-82-7:

Biodegradability : aerobic
Inoculum: activated sludge
Result: Readily biodegradable.
Biodegradation: 77 %
Exposure time: 28 d

100-41-4:

Biodegradability : Inoculum: activated sludge
Concentration: 22 mg/l
Result: Readily biodegradable.
Biodegradation: 70 %
Exposure time: 28 d
GLP: yes

110-54-3:

Biodegradability : aerobic
Inoculum: activated sludge
Result: Readily biodegradable.
Biodegradation: 83 %
Exposure time: 28 d



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Bioaccumulative potential

Components:

64742-49-0:

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

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

64742-89-8:

Partition coefficient: n-octanol/water : log Pow: 2.13 - 4.85 (25 °C)

110-82-7:

Bioaccumulation : Bioconcentration factor (BCF): 167
Remarks: No bioaccumulation is to be expected (log Pow <= 4).

Partition coefficient: n-octanol/water : log Pow: 3.44

100-41-4:

Partition coefficient: n-octanol/water : log Pow: 2.92

110-54-3:

Partition coefficient: n-octanol/water : log Pow: 3.90 - 4.11

Mobility in soil

No data available

Other adverse effects

Product:



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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., Very toxic to aquatic life with long lasting effects.

Components:

100-41-4:

Results of PBT and vPvB assessment	: This substance is not considered to be persistent, bio-accumulating nor toxic (PBT). This substance is not considered to be very persistent nor very bioaccumulating (vPvB).
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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): UN1993, FLAMMABLE LIQUID, N.O.S., (NAPHTHA (PETROLEUM), HYDROTREATED LIGHT, TOLUENE) , 3, II, Flash Point:-9 °C(16 °F)

IMDG (International Maritime Dangerous Goods): UN1993, FLAMMABLE LIQUID, N.O.S., (NAPHTHA (PETROLEUM), HYDROTREATED LIGHT, TOLUENE), 3, II

DOT (Department of Transportation): UN1993, Flammable liquids, n.o.s., (NAPHTHA (PETROLEUM), HYDROTREATED LIGHT, TOLUENE), 3, II



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SECTION 15. REGULATORY INFORMATION

OSHA Hazards : Flammable liquid, Carcinogen, Toxic by ingestion, Toxic by skin absorption, Moderate skin irritant, Moderate eye irritant, Teratogen, Reproductive hazard, Aspiration hazard

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	3248

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
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:

108-88-3	Toluene	30.7883 %
67-56-1	Methanol	24.8915 %
110-82-7	Cyclohexane	3.4589 %
100-41-4	Ethylbenzene	0.6157 %

Clean Air Act

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

108-88-3	Toluene	30.7883 %
67-56-1	Methanol	24.8915 %
100-41-4	Ethylbenzene	0.6157 %
110-54-3	Hexane	0.2217 %
71-43-2	Benzene	0.0312 %
98-82-8	Cumene	0.0002 %



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

108-88-3	Toluene	30.7883 %
67-56-1	Methanol	24.8915 %
110-82-7	Cyclohexane	3.4589 %
100-41-4	Ethylbenzene	0.6157 %
71-43-2	Benzene	0.0312 %
98-82-8	Cumene	0.0002 %

Clean Water Act

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

108-88-3	Toluene	30.7883 %
110-82-7	Cyclohexane	3.4589 %
100-41-4	Ethylbenzene	0.6157 %
71-43-2	Benzene	0.0312 %

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

108-88-3	Toluene	30.7883 %
110-82-7	Cyclohexane	3.4589 %
100-41-4	Ethylbenzene	0.6157 %
71-43-2	Benzene	0.0312 %

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

108-88-3	Toluene	30.7883 %
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US State Regulations

Massachusetts Right To Know

108-88-3	Toluene	30 - 50 %
67-56-1	Methanol	20 - 30 %
142-82-5	Heptane	0 - 20 %
110-82-7	Cyclohexane	0 - 5 %
71-43-2	Benzene	0 - 0.1 %

Pennsylvania Right To Know

426260-76-6	Heptane, branched, cyclic and linear	0 - 50 %
64742-49-0	Naphtha (pet), hydrotreated It	0 - 50 %
	Proprietary component	0 - 50 %
108-88-3	Toluene	30 - 50 %
67-56-1	Methanol	20 - 30 %
64742-89-8	Solvent naphtha (pet), It aliph.	0 - 30 %
142-82-5	Heptane	0 - 20 %
	Proprietary component	0 - 10 %
110-82-7	Cyclohexane	0 - 5 %
100-41-4	Ethylbenzene	0 - 1 %
71-43-2	Benzene	0 - 0.1 %



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New Jersey Right To Know

426260-76-6	Heptane, branched, cyclic and linear	0 - 50 %
64742-49-0	Naphtha (pet), hydrotreated It	0 - 50 %
	Proprietary component	0 - 50 %
108-88-3	Toluene	30 - 50 %
67-56-1	Methanol	20 - 30 %
142-82-5	Heptane	0 - 20 %
110-82-7	Cyclohexane	0 - 5 %
100-41-4	Ethylbenzene	0 - 1 %

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	
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:

Switzerland. New notified substances and declared preparations	:	n (Negative listing) (The formulation contains substances listed on the Swiss Inventory)
United States TSCA Inventory	:	y (positive listing) (On TSCA Inventory)
Canadian Domestic Substances List (DSL)	:	y (positive listing) (All components of this product are on the Canadian DSL.)
Australia Inventory of Chemical Substances (AICS)	:	n (Negative listing) (Not 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	:	n (Negative listing) (Not in compliance)



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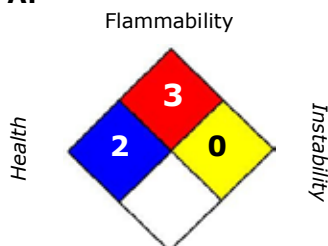
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		with the inventory)
Japan. ISHL - Inventory of Chemical Substances (METI)	:	n (Negative listing) (Not in compliance with the inventory)
Korea. Korean Existing Chemicals Inventory (KECI)	:	n (Negative listing) (Not in compliance with the inventory)
Philippines Inventory of Chemicals and Chemical Substances (PICCS)	:	n (Negative listing) (Not in compliance with the inventory)
China. Inventory of Existing Chemical Substances in China (IECSC)	:	n (Negative listing) (Not in compliance with the inventory)

SECTION 16. OTHER INFORMATION

Further information

NFPA:



=Slight, Special hazard. 2 = Moderate, 3 = High

HMIS III:

HEALTH	2*
FLAMMABILITY	3
PHYSICAL HAZARD	0

0 = not significant, 1

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.



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Legacey MSDS: 000000179174

Material number:
747433,

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