



5515 North Service Rd. #306
Burlington, Ontario L7L 6G4

Phone: 905-337-7411
Fax: 905-337-1686

megaloid.ca



1. PRODUCT IDENTIFICATION

Name: *Gunwash*

Synonyms: *None*

CAS# *See listing in Part 3*

Product Uses: *cleaning solvent for paint equipment*

Supplier *Megaloid Laboratories Limited*
Identifier: *5515 North Service Road, Ste 306*
Burlington, Ontario, Canada
L7L 6G4
Phone: 905-337-7411 / Fax: 905-337-1686

EMERGENCY INFORMATION Call CHEMTREC - (800) 424-9300 (CCN# 693764)

2. HAZARDS

GHS Class <i>(category)</i>	Flammable <i>(2)</i>	Eye irritant <i>(2A)</i>	Skin irritation <i>(2)</i>	Aspiration hazard <i>(1)</i>
Signal Word	DANGER			
Hazard Statements	<i>highly flammable liquid & vapour (H225)</i>	<i>Causes serious eye irritation (H319)</i>	<i>causes skin irritation (H316)</i>	<i>may be fatal if swallowed and enters airways (H304)</i>
GHS Class <i>(category)</i>	STOT <i>(3)</i>	Germ cell mutagenicity <i>(1B)</i>	Carcinogen <i>(2)</i>	Reproductive toxicity <i>(2)</i>
Hazard Statements	<i>inhalation may cause drowsiness or dizziness (H336)</i>	<i>may cause genetic defects (H340)</i>	<i>suspected of causing cancer (H351)</i>	<i>suspected of damaging fertility or the unborn child (H361)</i>



Label Pictograms

GHS Precautionary Statements for Labelling

Prevention

P201	Obtain special instructions before use.
P210	Keep away from heat, sparks, open flames and hot surfaces. No smoking.
P233	Keep container tightly closed.
P240	Ground or bond container and receiving equipment.
P241	Use explosion-proof electrical, ventilating and lighting equipment.
P242	Use only non-sparking tools.
P243	Take precautionary measures against static discharge.
P260	Do not breathe vapours.
P264	Wash hands thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P273	Avoid release to the environment.
P280	Wear eye protection, protective gloves and clothing of butyl rubber
Response	
P301, P310	IF SWALLOWED: Immediately call a POISON CENTRE or doctor.
P302, P352	IF ON SKIN: Wash with plenty of water.
P304, P340	If inhaled remove person to fresh air and keep comfortable for breathing.
P305, P351, P338	IF IN EYES: rinse continuously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.
P313, P333	If skin irritation or rash occurs, get medical advice/attention.
P331	Do NOT induce vomiting.
P370, P378	In case of fire use alcohol-resistant foam to extinguish.
Storage	
P403, P235	Store in a well-ventilated place. Keep cool.
P405	Store locked up.
Disposal	
P501	Dispose of contents and container in accordance with local, regional, national and international regulations.

3. COMPOSITION

Chemical Name:	CAS No.	%
<i>Ethyl Acetate</i>	141-78-6	20 - 40
<i>Acetone</i>	67-64-1	15 - 35
<i>Toluene</i>	108-88-3	5 - 15
<i>Methyl Ethyl Ketone</i>	78-93-3	5 - 15
<i>Methanol</i>	67-56-1	1 - 10
<i>Xylene (mixed)</i>	1330-20-7	1 - 10
<i>n-Heptane</i>	142-82-5	1 - 5
<i>Isopropanol</i>	67-63-0	1 - 5
<i>Propanol</i>	71-23-8	1 - 5
<i>Ethanol</i>	64-17-5	1 - 5
<i>n-Butyl Acetate</i>	123-86-4	1 - 5
<i>VM&P</i>	64742-49-0	1 - 5
<i>Glycol Ether PM</i>	107-98-2	1 - 5
<i>Isobutyl Alcohol</i>	78-83-1	1 - 5

Methyl Acetate	79-20-9	1 - 5
Methyl Isobutyl Ketone	108-10-1	0.5 - 2
1-Butanol	71-36-3	0.5 - 2
Tetrahydrofuran	109-99-9	0.5 - 2
Cyclohexane	110-82-7	0.5 - 2
n-Propyl acetate	109-60-4	0.5 - 2
PM Acetate	108-65-6	0.5 - 2
tert-Butyl acetate	540-88-5	0.1 - 1
Methyl Amy Ketone	110-43-0	0.1 - 1

4. FIRST AID

Inhalation

Remove from contaminated area promptly. **CAUTION: Rescuer must not endanger himself! If breathing stops, administer artificial respiration and seek medical aid promptly.**

Skin Contact

Wash with plenty of water. Remove contaminated clothing and do not reuse until thoroughly laundered.

Eye Contact

Wash eyes with plenty of water, holding eyelids open. Seek medical assistance if there is any irritation.

Ingestion

Give plenty of water to dilute product. Do not induce vomiting (NOTE below). Keep victim quiet. If vomiting occurs, lower victim's head below hips to prevent inhalation of vomited material. Seek medical help promptly.

First-aid Comments

Inadvertent inhalation of vomited material may seriously damage the lungs. The danger of this is greater than the risk of poisoning through absorption of this relatively low-toxicity substance. The stomach should only be emptied under medical supervision, and after the installation of an airway to protect the lungs.

5. FIRE FIGHTING & FLAMMABILITY

Extinguishing Media

Suitable Extinguishing Media

Foam, dry chemical, water fog, water spray only to cool & dilute, product floats on water - water jet spreads flames

Combustion Products

Carbon monoxide, nitrogen oxides, smoke, part oxidized hydrocarbon fragments

Special Protective Equipment and Precautions for Fire-fighters

Firefighters must wear SCBA. Fire-fighters may enter the area if positive pressure SCBA and full Bunker Gear is worn.

6. ACCIDENTAL RELEASE MEASURES

Serious Fire Potential:

blanket spill with foam as a precaution against accidental ignition. Take extreme care to avoid sparks - do not operate (turn on OR off) electrical appliances near spill, unless explosion proof.

Personal Precautions, Protective Equipment, and Emergency Procedures

Evacuate the area immediately. Isolate the hazard area. Keep out unnecessary and unprotected personnel. Eliminate all ignition sources. Use grounded, explosion-proof equipment. Increase ventilation to area or move leaking container to a well-ventilated and secure area.

Environmental Precautions

If the spill is inside a building, prevent product from entering drains, ventilation systems and confined areas.

Methods and Materials for Containment and Cleaning Up

Leak Precaution: dyke to control spillage and prevent environmental contamination

Handling Spill: Ventilate contaminated area; recover free liquid with suitable pumps; absorb residue on an inert sorbent, sweep & pick up using plastic or aluminium shovel, & store in closed containers for recycling or disposal.

Other Information

Report spills to local health, safety and environmental authorities, as required.

7. HANDLING & STORAGE

Precautions for Safe Handling

Always ground or electrically bond the source container, receiving container & pump before transferring contents. Avoid splashing by ensuring that the product nozzle is below the surface in the receiving container. Use non-sparking bronze or aluminum hand tools. All electrical & mechanical equipment (including lighting, switchgear & fork lift trucks) used with or around this product must be explosion-proof. Ground or electrically bond the source container, receiving container & transfer pump before transferring contents. Avoid splashing by keeping the product nozzle below the surface in the receiving container. Ensure that containers, empty or full, are tightly sealed unless in use. Avoid generating or breathing product vapour. If vapour forms in use, install adequate ventilation. If dealing with a spill & ventilation is impossible or impractical, wear a respirator with organic vapour cartridge. Limit contact with skin & wash work clothes frequently. An eye bath and safety shower must be available near the workplace.

Never cut, drill, weld or grind on or near this container.

Conditions for Safe Storage

Store in a cool, dry environment, away from sources of ignition, heat and oxidising agents. Empty containers may contain a flammable / explosive vapour. Containers, empty or full, must be tightly sealed unless in use.

8. EXPOSURE CONTROL & PERSONAL PROTECTION

Ethyl Acetate

Ontario TWAEV 400ppm / 1440mg/m³
AGGIH TLV 400ppm / 1440mg/m³
OSHA PEL 400ppm / 1440mg/m³

Ontario STEV not listed
ACGIH STEL not listed
OSHA STEL not listed

Acetone

Ontario TWAEV 500ppm / 1187mg/m³
AGGIH TLV 500ppm / 1187mg/m³
OSHA PEL 750ppm / 1780mg/m³

Ontario STEV 750ppm / 1780mg/m³
ACGIH STEL 750ppm / 1780mg/m³
OSHA STEL 1000ppm / 2400mg/m³

Toluene

Ontario TWAEV 20ppm / 75mg/m³
AGGIH TLV 20ppm / 75mg/m³
OSHA PEL 100ppm / 375mg/m³

Ontario STEV not listed
ACGIH STEL not listed
OSHA STEL 150ppm / 565mg/m³

M.E.K.

Ontario TWAEV 200ppm / 590mg/m³
AGGIH TLV 200ppm / 590mg/m³
OSHA PEL 200ppm / 590mg/m³

Ontario STEV 300ppm / 885mg/m³
ACGIH STEL 300ppm / 885mg/m³
OSHA STEL 300ppm / 885mg/m³

Methanol

Ontario TWAEV 200ppm / 260mg/m³
AGGIH TLV 200ppm / 260mg/m³
OSHA PEL 200ppm / 260mg/m³

Ontario STEV 250ppm / 328mg/m³
ACGIH STEL 250ppm / 328mg/m³
OSHA STEL 250ppm / 328mg/m³

Xylene

Ontario TWAEV 200ppm / 490mg/m³
AGGIH TLV 200ppm / 491mg/m³
OSHA PEL 400ppm / 980mg/m³

Ontario STEV 400ppm / 980mg/m³
ACGIH STEL 400ppm / 983mg/m³
OSHA STEL 500ppm / 1225mg/m³

Heptane

Ontario TWAEV 400ppm / 1635mg/m³
AGGIH TLV 400ppm / 1635mg/m³
OSHA PEL 400ppm / 1635mg/m³

Ontario STEV 500ppm / 2045mg/m³
ACGIH STEL 500ppm / 2045mg/m³
OSHA STEL 500ppm / 2045mg/m³

Isopropanol

Ontario TWAEV 200ppm / 490mg/m³
AGGIH TLV 200ppm / 491mg/m³
OSHA PEL 400ppm / 980mg/m³

Ontario STEV 400ppm / 980mg/m³
ACGIH STEL 400ppm / 980mg/m³
OSHA STEL 500ppm / 1225mg/m³

n-Propanol

Ontario TWAEV 100ppm / 246mg/m³
AGGIH TLV 100ppm / 246mg/m³
OSHA PEL 200ppm / 500mg/m³

Ontario STEV 250ppm / 615mg/m³
ACGIH STEL not listed
OSHA STEL 250ppm / 615mg/m³

Ethanol

Ontario TWAEV 1000ppm / 1900mg/m³
AGGIH TLV 1000ppm / 1900mg/m³
OSHA PEL not listed

Ontario STEV not listed
ACGIH STEL not listed
OSHA STEL not listed

n-Butyl Acetate

Ontario TWAEV 150ppm / 710mg/m³
AGGIH TLV 150ppm / 713mg/m³
OSHA PEL 150ppm / 710mg/m³

Ontario STEV 200ppm / 950mg/m³
ACGIH STEL 200ppm / 950mg/m³
OSHA STEL 200ppm / 950mg/m³

VM&P

Ontario TWAEV 1350mg/m³
AGGIH TLV not listed
OSHA PEL not listed

Ontario STEV not listed
ACGIH STEL not listed
OSHA STEL not listed

Glycol Ether PM

Ontario TWAEV 100ppm / 368mg/m³
AGGIH TLV 50ppm / 184mg/m³
OSHA PEL not listed

Ontario STEV 150ppm / 552mg/m³
ACGIH STEL 100ppm / 368mg/m³
OSHA STEL not listed

Isobutanol

Ontario TWAEV not listed
AGGIH TLV 50ppm / 152mg/m³
OSHA PEL 100ppm / 300mg/m³

Ontario STEV not listed
ACGIH STEL not listed
OSHA STEL not listed

Methyl Acetate

Ontario TWAEV 200ppm / 600mg/m³
AGGIH TLV 200ppm / 600mg/m³
OSHA PEL 200ppm / 610mg/m³

Ontario STEV 250ppm / 760mg/m³
ACGIH STEL 250ppm / 760mg/m³
OSHA STEL 250ppm / 760mg/m³

M.I.B.K

Ontario TWAEV 50ppm / 205mg/m³
AGGIH TLV 20ppm / 81mg/m³
OSHA PEL 100ppm / 410mg/m³

Ontario STEV 75ppm / 307mg/m³
ACGIH STEL not listed
OSHA STEL not listed

Butanol

Ontario TWAEV 20ppm / 60mg/m³
AGGIH TLV 20ppm / 60mg/m³
OSHA PEL 50ppm / 150mg/m³

Ontario STEV not listed
ACGIH STEL not listed
OSHA STEL not listed

Tetrahydrofuran

Ontario TWAEV 50ppm / 145mg/m³ (skin)
AGGIH TLV 50ppm / 145mg/m³ (skin)
OSHA PEL 200ppm / 580mg/m³ (skin)

Ontario STEV 100ppm / 290mg/m³
ACGIH STEL 100ppm / 290mg/m³
OSHA STEL 250ppm / 725mg/m³

Cyclohexane

Ontario TWAEV 100ppm / 334mg/m³
AGGIH TLV 100ppm / 334mg/m³
OSHA PEL 300ppm / 1050mg/m³

Ontario STEV not listed
ACGIH STEL not listed
OSHA STEL not listed

NP Acetate

Ontario TWAEV 200ppm / 830mg/m³
AGGIH TLV 200ppm / 830mg/m³
OSHA PEL 200ppm / 830mg/m³

Ontario STEV 250ppm / 1040mg/m³
ACGIH STEL 250ppm / 1040mg/m³
OSHA STEL 250ppm / 1040mg/m³

PM Acetate

Ontario TWAEV not listed
AGGIH TLV not listed
OSHA PEL not listed

Ontario STEV not listed
ACGIH STEL not listed
OSHA STEL not listed

**Tert-Butyl
Acetate**

Ontario TWAEV 40ppm / 144mg/m³
AGGIH TLV 50ppm / 150mg/m³
OSHA PEL not listed

Ontario STEV not listed
ACGIH STEL not listed
OSHA STEL not listed

M.A.K.

Ontario TWAEV 25ppm / 115mg/m³
AGGIH TLV 50ppm / 233mg/m³
OSHA PEL 100ppm / 465mg/m³

Ontario STEV not listed
ACGIH STEL not listed
OSHA STEL not listed

Ventilation	<i>mechanical ventilation may be required to control airborne titre; depending on handling procedures</i>
Hands	<i>no single material is resistant to all the above components; nitrile is a reasonable choice, but always check protective apparel for signs of swelling, softening or liquid penetration – other types of gloves with layers of different materials may be superior to nitrile; consult supplier to confirm suitability</i>
Eyes	<i>Safety glasses with side shields – always protect the eyes</i>
Clothing	<i>wear impermeable (above) apron, boots, & long sleeves if there is any danger of splashing.</i>
Respiratory Protection	<i>Mechanical ventilation may be required to control airborne vapour or mist to regulated limits; a respirator with organic vapour cartridge should be available for escape, (store respirators in airtight containers).</i>

Appropriate Engineering Controls

Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of mist below their respective threshold limit value.

9. PHYSICAL PROPERTIES

Appearance	<i>Clear colourless liquid.</i>
Odour	<i>sharp odour or acetone (nail polish remover)</i>
Odour threshold	<i>approx. 60ppm (acetone)</i>
pH	<i>none – (does not liberate hydrogen ions when dissolved)</i>
Melting Point/Freezing Point	<i>not known – below -40°C / -40°F</i>
Initial Boiling Point/Range	<i>approx. 65°C to 140°C / 140°F to 284°F</i>
Flash Point	<i>above -20°C / -4°F (closed cup, acetone)</i>
Evaporation Rate	<i>approx. 5 (Butyl Acetate =1)</i>
Flammability (Solid, Gas)	<i>Not Available</i>
Upper/Lower Flammability or Explosive Limit	<i>not known – far too many components . . .</i>
Decomposition Temperature	<i>no decomposition up to Autoignition Temperature</i>
Vapour Density (air = 1)	<i>1.1 (methanol), 1.4 (ethanol); all other components are >2</i>
Specific Gravity	<i>not measured; approx. 0.85 (20/20°C)</i>
Solubility	<i>approx. 50%. Also soluble in most organic solvents</i>
Partition Coefficient, n-Octanol/Water (Log Kow)	<i>not known</i>
Auto-ignition Temperature	<i>above 245°C / 473°F (VM&P Naphtha)</i>
Conversion Factor	<i>1 ppm = 4.9 mg/m³</i>
Viscosity	<i>not measured; thin mobile liquid</i>
Physical State	<i>Liquid</i>

10. REACTIVITY

Dangerously Reactive *with strong oxidising agents.*
Also Reactive *with reducers, acids & alkalis.*

Chemical Stability

stable; will not polymerize

Possibility of Hazardous Reactions

None known.

Conditions to Avoid

Avoid contact with sparks, fire, direct sunlight, hot glowing surfaces, welding arcs, high temperature sources and incompatibles.

Mechanical Impact

not sensitive

11. TOXICITY

Acute Toxicity	
Calculated LD₅₀ (oral)	2000mg/kg (rat)
Calculated LD₅₀ (skin)	7960mg/kg (rabbit)
Calculated LC₅₀ (inhalation)	2995ppm (rat)

Skin Corrosion/Irritation

may irritate – largely through removal of protective skin oils.

Serious Eye Damage/Irritation

probably severely irritating.

STOT (Specific Target Organ Toxicity) - Single Exposure

Inhalation

vapour irritating to the respiratory system; may cause headache, dizziness, drowsiness, nausea.

Skin Absorption

slight; no toxic effects likely by this route.

Ingestion

not known – not a route of industrial exposure.

STOT (Specific Target Organ Toxicity) - Repeated Exposure

Prolonged exposure may cause dermatitis – largely through removal of protective skin oils.

Respiratory and/or Skin Sensitization

Not known to be a respiratory sensitizer.

Carcinogenicity

IARC: Group 2B – Possibly carcinogenic to humans. ACGIH®: A5 – Not suspected as a human carcinogen. Known human carcinogen. NTP: Not specifically listed. OSHA: Not specifically listed.

Reproductive Toxicity

Sexual Function and Fertility

May harm the unborn child.

Germ Cell Mutagenicity

May be mutagenic based on limited evidence.

12. ECOLOGICAL INFORMATION

Ethyl Acetate:

Bioaccumulation - metabolized & excreted very quickly; cannot bio accumulate

Biodegradation - biodegrades readily & rapidly in the presence of oxygen; 90% degradation in 20days

Abiotic Degradation - reacts with atmospheric hydroxyl radicals; ½-life in air 10 days; in pH=7 water, hydrolysis ½-life 2 years

Mobility in soil, water - water soluble; moves readily in soil and water

Aquatic Toxicity

LC50 (Fish, 96hr) - 484mg/litre (Oncorhynchus mykiss), 220mg/litre (Pimephales promelas), 455mg/litre (Salmo gairdneri)

EC50 (Crustacea, 48hr) - 164mg/litre (Daphnia cucullata), 717mg/litre (Daphnia magna), 262 & 295mg/litre (Daphnia pulex), 750mg/litre (Gammarus pulex)

EC50 (Algae) - >1000mg/litre (Chlorella aeruginosa & Scenedesmus pannonicus), 3300 & 5600mg/litre (Scenedesmus subspicatus)

EC50 (Bacteria) - 1180 & 5870mg/litre (Photobacterium phosphoreum), 7400mg/litre (Pseudomonas fluorescens), 202mg/litre (Entosiphon sulcatum)

Acetone:

Bioaccumulation - rapidly excreted and/or metabolised by living creatures; cannot bioaccumulate

Biodegradation - biodegrades rapidly in the presence of oxygen; 76% & 84% in 20days, >90% in 28days

Abiotic Degradation - reacts slowly with atmospheric hydroxyl radicals; estimated ½-life in air is ~80 days

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Mobility in soil, water - acetone moves readily in soil & water; volatilisation is rapid, mitigating mobility

Aquatic Toxicity

LC₅₀ (Fish, 96hr) - 11,000mg/litre (Alburnus alburnus), 6210-8120mg/litre (Pimephales promelas), 5540mg/litre (Salmo gairdneri)

EC₅₀ (Crustacea, 48hr) - 7635mg/litre (Daphnia cucullata), 12,600mg/litre (Daphnia magna), 8800mg/litre (Daphnia pulex), 16,700mg/litre (Nitocra spinipes)

EC₅₀ (Algae, 14 day) - 2844mg/litre (Anabena cylindrica), 21,725mg/litre (Anabena inaequalis), 29,151mg/litre (Anabena variabilis)

NOEC (Algae) - 3400mg/litre (Chlorella pyrenoidosa), 4740mg/litre (Selenastrum capricornutum),

(**No Observed Effect Conc.**) - 6000mg/litre (Skeletonema costatum)

EC₅₀ (Bacteria) - 59-67mg/litre ("domestic activated sewage sludge"), 14,500mg/litre (Photobacterium phosphoreum), & others

Toluene:

Bioaccumulation - not a bioaccumulator

Biodegradation - biodegrades readily & rapidly in the presence of oxygen; many results available: soil ½-life from hours to 70 days; in ground water complete degradation seen in 8 days – longer in clean water; 80% & 86% in 20 days, also 81% in 5 days faster degradation likely in acclimated sewage sludge

Abiotic Degradation - reacts with atmospheric hydroxyl radicals; ½-life in air estimates: 1.3, 1.8 & 3 days

Mobility in soil, water - slightly water soluble; moves moderately rapidly in soil & water

Aquatic Toxicity

LC₅₀ (Fish, 96hr) - 26, 28 & 66mg/litre (Pimephelas promelas), 13 & 58mg/litre (Carcassius auratus), 59mg/litre (Lebistes reticulatus), 13mg/litre (Lepomis macrochirus), 6.3mg/litre (Oncorhynchus kisutch), 24mg/litre (Oncorhynchus mykiss)

EC₅₀ (Crustacea 24hr) - 270mg/litre (Daphnia magna), 24-74mg/litre (Nitocra spinipes), 17mg/litre (Palaemoetes pugio)

EC₅₀ (Algae) - 245mg/litre (Chlorella vulgaris), 125-160mg/litre (Scenedesmus subspicatus), 432mg/litre (Selenastrum capricornutum)

EC₂₀ (Bacteria) - 950mg/litre ("other bacteria"), 84mg/litre (Nitrosomonas sp.)

Methyl Ethyl Ketone:

Bioaccumulation - not a bioaccumulator; biological ½-life is 4-5 hours

Biodegradation - biodegrades readily & rapidly in the presence of oxygen; 89% in 20 days, 98% in 28 days, anaerobic 89% in 21 days

Abiotic Degradation - reacts with atmospheric hydroxyl radicals; estimated ½-life in air 14 days; 4 days (*direct photolysis*)

Mobility in soil, water - water soluble; moves readily in soil and water

Aquatic Toxicity

LC₅₀ (Fish, 96hr) - 2993 & 3220mg/litre (Pimephelas promelas), 5600mg/litre (Gambusia affinis), 4467mg/litre (Lepomis macrochirus)

EC₅₀ (Crustacea, 48hr) - 308mg/litre (Daphnia magna)

EC₅₀ (Crustacea, 24hr) - 7060 & 8890mg/litre (Daphnia magna)

EC₃ (Algae, 72hr) - 1200mg/litre (Microcystis aeruginosa), 4300mg/litre (Scenedesmus quadricauda), 1972mg/litre (Pseudokirchnerella subcapitata)

EC₅₀ (Bacteria) - 5100mg/litre (Photobacterium phosphoreum), 2982mg/litre (Paramecium chilomonas)

EC₃ (Bacteria) - 1150mg/litre (Pseudomonas putida), 2830mg/litre (Urenoma parduzci)

Methanol:

Bioaccumulation - not a bioaccumulator; biological ½-life is 30-52 hours

Biodegradation - biodegrades readily aerobically; many degradation rates reported, eg: 48% in 5 days & 93% in 2 days; ½-life in sandy loam 1-3 days

Abiotic Degradation - reacts slowly with atmospheric hydroxyl radicals; estimated ½-life in air is 17 days

Mobility in soil, water - water soluble; moves readily in soil and water

Aquatic Toxicity

LC₅₀ (Fish, 96hr) - 15,400mg/litre (Lepomis macrochirus), 8530, 10,800, 19,000 & 20,100mg/litre (Oncorhynchus mykiss),

28,100 & 29,400mg/litre (Pimephelas promelas), 20,000mg/litre (Salmo gairdneri), 7900-27,700mg/litre (Agonus cataphractus)

EC₅₀ (Crustacea, 24hr) - >10,000mg/litre (Daphnia magna), 12,000mg/litre (Nitocra spinipes, 96hr)

EC₅₀ (Algae) - 3600 & 28,000mg/litre (Chlorella pyrenoidosa)

EC₅₀ (Bacteria) - 71,210mg/litre (municipal sewage sludge), 7690mg/litre (Paramecium caudatum), 14,700mg/litre (Photobacterium phosphoreum)

Xylene:

Bioaccumulation - cannot bioaccumulate – *biological ½-life in vertebrates is measured in hours*

Biodegradation - biodegrades readily in the presence of oxygen; 72% in 20 days in sewage sludge; also 70% in 10 days

Abiotic Degradation - xylene reacts with atmospheric hydroxyl radicals; ½-life in air is 16-28 hours

Mobility in soil, water - sufficiently water soluble to move readily in soil & water

Aquatic Toxicity

LC₅₀ (Fish, 96hr) - 780mg/litre (Cyprinus carpio), 13.5-17.3 (Oncorhynchus mykiss), 86mg/litre (Leuciscus idus), 26.7mg/litre (Pimephales promelas)

EC₅₀ (Crustacea, 48hr) - 0.8mg/litre (Gammarus lacustris), 8.5mg/litre (Palemonetes pugio)

EC₅₀ (Algae) - 10mg/litre (Cricosphaera carterae)

EC₅₀ (Bacteria) - >157, >175 & >198mg/litre (*domestic sewage sludge*)

Heptane:

Bioaccumulation - volatile & readily metabolised by microorganisms; nevertheless, potential bioaccumulator

Biodegradation - biodegrades readily in the presence of oxygen; 23-100% in 5 days depending on bacterial inoculum & test conditions; also 70% in 10 days, 100% in 25 days, 100% in 4 days, 23% in 3 days

Abiotic Degradation - destroyed by direct photolysis; estimated ½-life in air of 1.1 days & 4.5 days

Mobility in soil, water - water insoluble; moves slowly in soil & water; rapid evaporation from soil, limiting movement

Aquatic Toxicity

LC₅₀ (Fish, 96hr) - 375mg/litre (Tilapia mossambica), 220-270mg/litre (Leuciscus idus), >100mg/litre (Oncorhynchus kisutch) – *no mortality*
 TLm (Fish, 48hr) - 4924mg/litre (Gambusia affinis),
 EC₅₀ (Crustacea, 24hr) - 1.5mg/litre (Daphnia magna), 0.1mg/litre (Mysidopsis bahia), 0.2mg/litre (Chaetogammarus marinus)
 EC₅₀ (Algae) - 4.34mg/litre (Pseudokirchnerella subcapitata)
 EC₅₀ (Bacteria) - 22.6mg/litre (Tetrahymena pyriformis, growth inhibition)

Isopropanol:

Bioaccumulation - low potential for bioaccumulation
 Biodegradation - biodegrades readily & rapidly: aerobic – >75% in 28days; anaerobic – >65% in 20days
 Abiotic Degradation - reacts with atmospheric hydroxyl (OH) radicals; estimated ½-life in air 3.2 days
 Mobility in soil, water - water soluble; moves readily through soil and the water column

Aquatic Toxicity

LC₅₀ (Fish, 96) - 9640, 10,400 & 11,130mg/litre (Pimephelas promelas), 4200mg/litre (Rasbora heteromorpha)
 LC₅₀ (Crustacea, 48) - 1100 & 1400mg/l (Crangon crangon), 13,300mg/litre (Daphnia magna)
 EC₅₀ (Algae, 96hr) - 1000mg/l (Scenedesmus subspicatus)
 LC₅₀ (Microorganisms) - 1050 & 5175mg/l (Pseudomonas putida), 41,676mg/litre (“domestic sewage”), 39,540 & 112,000mg/litre (“industrial sewage”), 35,000 & 42,000mg/litre (Photobacterium phosphoreum) & others

n-Propyl Alcohol:

Bioaccumulation - cannot bioaccumulate
 Biodegradation - biodegrades rapidly in the presence of oxygen; aerobic: 75% in 20 days, 81% in 15 days; anaerobic 77-81% biodegradation in 15 days
 Abiotic Degradation - reacts with atmospheric hydroxyl radicals; estimated ½-life in air is 2.9 days
 Mobility in soil, water - highly water soluble; moves readily in soil and water

Aquatic Toxicity

LC₅₀ (Fish, 96hr) - 3800mg/litre (Alburnus alburnus), 4480 & 4555 mg/litre (Pimephelas promelas), 4650mg/litre (Cyprinodon sp.)
 EC₅₀ (Crustacea, 48hr) - 3644 & 6300mg/litre (Daphnia magna), 1000mg/litre (Gammarus pulex), 1520mg/litre (Nemoura cinerea)
 EC₅₀ (Algae, 72hr) - 9170mg/litre (Pseudokirchnerella subcapitata)
 NOEC (Algae, 48hr) - 1150mg/litre (Chlorella pyrenoidosa)
 EC₅₀ (Bacteria) - 9600mg/litre (“activated sludge”), 8686 & 18,400mg/litre (Photobacterium phosphoreum)

Ethanol:

Bioaccumulation - all components are readily metabolised & eliminated and cannot bioaccumulate
 Biodegradation - biodegrades readily & rapidly with oxygen; 37-86% in 5 days
 Abiotic Degradation - react with atmospheric hydroxyl radicals; est. ½-life in air 4-6 days (*ethanol*)
 Mobility in soil, water - water soluble; moves readily in soil and water

Aquatic Toxicity

LC₅₀ (Fish, 96hr) - 14,200 & 15,300mg/litre (Pimephelas promelas), 10,000-11500mg/litre (Alburnus alburnus)
 LC₅₀ (Crustacea, 48hr) - 9270-14,220mg/litre (Daphnia magna)
 EC₅₀ (Algae) - 10,943-11,619mg/litre (Skeletonema costatum), 9310mg/litre (Chorella pyrenoidosa)

n-Butyl Acetate:

Bioaccumulation - rapidly eliminated from the body and is not a bioaccumulator
 Biodegradation - degrades readily in the presence of oxygen; biodegradation of 55-85% in 20days & 98% in 28days
 Abiotic Degradation - reacts with atmospheric hydroxyl radicals; estimated ½-life in air is 1.5–4 days
 Mobility in soil, water - sufficiently water soluble to move moderately rapidly in soil and water

Aquatic Toxicity

LC₅₀ (Fish, 96hr) - 18mg/litre (Pimephelas promelas), 100mg/litre (Lepomis macrochirus), 62mg/litre (Leuciscus idus), 185mg/litre (Menidia beryllina)
 EC₅₀ (Crustacea, 24hr) - 150mg/litre (Artemia salina), 72.8 & 205mg/litre (Daphnia magna)
 EC₅₀ (Algae) - 675mg/litre (Scenedesmus subspicatus)
 EC₅₀ (Bacteria) - 959mg/litre (Pseudomonas subspicatus)

VM&P Naphtha:

Bioaccumulation - moderate bioaccumulator in marine creatures; rapid volatilisation reduces the likelihood of accumulation
 Biodegradation - biodegrades rapidly in the presence of oxygen; 77% in 28 days, 95% in 25 days, 89% in 28 days
 Abiotic Degradation - reacts with atmospheric hydroxyl radicals; component hydrocarbons have estimated ½-lives 0.35 – 6 days
 Mobility in soil, water - despite being water insoluble, expected to move quite readily in soil & water; rapid volatilisation may mitigate its spread

Aquatic Toxicity

LC₅₀ (Fish, 96hr) - 4.1, 8.2, 11 & 15mg/litre (Pimephelas promelas), 10 & 15mg/litre (Oncorhynchus mykiss), 27mg/litre (Menidia beryllina)
 EC₅₀ (Crustacea, 96hr) - 4.3mg/litre (Crangon crangon), 2.6mg/litre (Chaetogammarus marinus)
 EC₅₀ (Algae) - 4700mg/litre (Selenastrum capricornutum)
 EC₅₀ (Bacteria) - not known – *rapid biodegradability suggests low toxicity to bacteria*

Glycol Ether PM:

Bioaccumulation - apidly eliminated from living organisms; not a bioaccumulator; biological ½-life is ~2.5 hours
 Biodegradation - iodegrades rapidly in the presence of oxygen; 58% in 20 days, ~90% in 29 days, 96% in 28 days¹
 Abiotic Degradation - reacts with atmospheric hydroxyl radicals; estimated ½-life in air is 3.1hr & 21hr
 Mobility in soil, water - water soluble; moves readily in soil & water

Aquatic Toxicity

LC₅₀ (Fish, 96hr) - 4600-10,000mg/litre (Leuciscus idus), 20,800mg/litre (Pimephales promelas)
 EC₅₀ (Crustacea, 48hr) - 23,300mg/kg (Daphnia magna), 2954mg/kg (Acartia tonsa)
 EC₅₀ (Algae) - >1000mg/litre (Pseudokirchnerella subcapitata), 6745 & 8578mg/litre (Skeletonema costatum)

EC₅₀ (Bacteria) - >1000mg/litre (activated sludge), >5000 & >6500mg/litre (Salmonella typhimurium) – *no effect seen*

Isobutanol:

Bioaccumulation - highly water soluble and not a bioaccumulator

Biodegradation - biodegrades rapidly in the presence of oxygen; >58% in 5days, >90% in 2 weeks & many others

Abiotic Degradation - reacts with atmospheric hydroxyl radicals; estimated ½-life in air 20 hours; also 56 hours

Mobility in soil, water - this product is water soluble and will move readily in soil and water

Aquatic Toxicity

LC₅₀ (Fish, 96hr) - 2330mg/litre (Carassius auratus), 1800mg/litre (Gambusia affinis), 1460mg/litre (Ictalurus punctatus), 1600mg/litre (Lepomis macrochirus), 1430 & 1510mg/litre (Pimephelas promelas), 1330mg/litre (Salmo gairdneri) & others

EC₅₀ (Crustacea, 48hr) - 1030, 1220 & 1440mg/litre (Daphnia magna), 1100mg/litre (Daphnia pulex), 600mg/litre (Artemia salina) & others

EC₅₀ (Algae) - 1250mg/litre (Scenedesmus subspicatus), 6400mg/litre ("plankton")

EC₅₀ (Bacteria) - 1225mg/litre (Photobacterium phosphoreum)

TGK (Bacteria) - 290mg/litre (Microcystis aeruginosa), 280mg/litre (Pseudomonas fluorescens & Pseudomonas putida)

Methyl Acetate:

Bioaccumulation - not a bioaccumulator

Biodegradation - biodegrades readily & rapidly in the presence of oxygen; over 70% in 28 days

Abiotic Degradation - reacts with atmospheric hydroxyl radicals; estimated ½-life in air is 41 days

Mobility in soil, water - water soluble; moves readily in soil and water

Aquatic Toxicity

LC₅₀ (Fish, 96hr) - 320 & 400mg/litre (Pimephelas promelas)

Methyl Isobutyl Ketone:

Bioaccumulation - rapidly metabolised or excreted; cannot bioaccumulate

Biodegradation - biodegrades rapidly in the presence of oxygen; in 5 days 76%; also 53% in 20 days in sea water

Abiotic Degradation - reacts with atmospheric hydroxyl radicals; estimated ½-life in air is 14 hours

Mobility in soil, water - sufficiently water soluble to move readily in soil and water

Aquatic Toxicity

LC₅₀ (Fish, 96hr) - 505, 509 & 780mg/litre (Pimephelas promelas), 600mg/litre (Salmo gairdneri), 672 & 744mg/litre (Leuciscus idus, 48hr)

EC₅₀ (Crustacea, 24hr) - 1230mg/litre (Artemia salina), 240, 862, 930, 1550, 3682 & 4280 mg/litre (Daphnia magna)

EC₅₀ (Algae) - 980mg/litre (Scenedesmus subspicatus), 400mg/litre (Selenastrum capricorn)

EC₅₀ (Bacteria) - 80mg/litre (Photobacterium phosphoreum)

EC₁₀ (Bacteria) - 413mg/litre (Pseudomonas putida) – *this is an EC₁₀, not an EC₅₀*

n-Butanol:

Bioaccumulation - not a bioaccumulator; in rats, 83% of butanol dose metabolised within 24 hours

Biodegradation - biodegrades readily and rapidly in the presence of oxygen; ½ life in soil 5-8 days; ½ life in sewage sludge 3 days

Abiotic Degradation - reacts with atmospheric hydroxyl radicals; estimated ½-life in air is 48 hours

Mobility in soil, water - water soluble; moves readily in soil and water

Aquatic Toxicity

LC₅₀ (Fish, 96hr) - 1630 & 1730-1910mg/litre (Pimephelas promelas), 2300mg/litre (Alburnus alburnus), 1200-1700mg/litre (Leuciscus idus)

EC₅₀ (Crustacea, 24hr) - 2950mg/litre (Artemia salina), 1855 & 2337mg/litre (daphnia magna),

EC₅₀ (Algae) - >500mg/litre (Scenedesmus subspicatus), 8500mg/litre (Chlorella pyrenoidosa)

EC₅₀ (Bacteria) - 2041mg/litre (Photobacterium phosphoreum), 4400mg/litre (Pseudomonas putida)

Tetrahydrofuran:

Bioaccumulation - not a bioaccumulator; biological ½-life ~30 minutes

Biodegradation - biodegrades in the presence of oxygen; rates from 34% in 28 days to 100% in 14 days

Abiotic Degradation - reacts with atmospheric hydroxyl radicals; estimated ½-life in air is 21-24 hours

Mobility in soil, water - water soluble; moves readily in soil and water

Aquatic Toxicity

LC₅₀ (Fish, 48hr) - 2160 & 3800mg/litre (Pimephelas promelas, 96hr), 2400mg/litre (Carassius auratus & Cyprinus auratus), 4400mg/litre (Cyprinus carpio), 2820 & 2930mg/litre Leuciscus idus) 3800 & 5900mg/litre, (Oryzias latipes), *and others* .

EC₅₀ (Crustacea) - >10,000mg/litre (Daphnia magna), 8900mg/litre (Daphnia pulex)

EC₁₀ (Algae) - >1000mg/litre ("plankton algae")

EC₃ (Algae) - 3700mg/litre (Scenedesmus quadricauda)

EC₂₀ (Bacteria) - >1000mg/litre ("activated sludge"), 800mg/litre ("activated sludge")

EC₁₀ (Bacteria) - 800mg/litre ("activated sludge"), >1000mg/litre ("mixed bacterial population")

Cyclohexane:

Bioaccumulation - cyclohexane is not a bioaccumulator; in any case, rapid volatility & buoyancy (*floats on water*) limit bioaccumulation

Biodegradation - biodegradation data for cyclohexane is highly variable; from 10% in 10hr to highly resistant to biological attack; in one study, 45% biodegradation was seen in 8 days when cyclohexane was added to gasoline & observed; *also 77% in 28 days, rapid volatilization from soil or water limits opportunity for biodegradation*

Abiotic Degradation - reacts with atmospheric hydroxyl radicals; estimated ½-life in air is 45hr, 52hr & 15hr

Mobility in soil, water - water insoluble, but moderately mobile in soil & water

Aquatic Toxicity

LC₅₀ (Fish, 96hr) - 4.5, 93-117mg/litre (Pimephelas promelas), 57.7mg/litre (Poecilia reticulata), 9mg/litre (Oryzias latipes) 55mg/litre (Leuciscus idus, 48hr) & others

EC₅₀ (Crustacea, 24hr) - 0.9, 2.4 & 3.8mg/litre (Daphnia magna, 48hr), 135mg/litre (Daphnia magna, 96hr)

EC₅₀ (Algae) - 38mg/litre (Chlamidomonas sp.), 32mg/litre (Chlorella vulgaris), 3.4 & 9.3mg/litre (Pseudokirchnerella subcapitata), >500mg/litre (Scenedesmus subspicatus)

EC₅₀ (Bacteria) - 97mg/litre (Nitrosomonas sp.), 200mg/litre (Photobacterium phosphoreum), 29mg/litre (*mixed microbial culture*)

n-Propyl Acetate:

Bioaccumulation - rapidly eliminated from the body and is not a bioaccumulator

Biodegradation - degrades rapidly in the presence of oxygen – 5day degradation – 62%; 10day – 70%, 20day – 78%

Abiotic Degradation - reacts with atmospheric hydroxyl radicals; estimated ½-life in air is 5 days

Mobility in soil, water - water soluble; moves moderately rapidly in soil and water

Aquatic Toxicity

LC₅₀ (Fish, 96hr) - 56-64mg/litre (Pimephelas promelas), 60mg/litre (Pimephelas promelas)

EC₅₀ (Crustacea, 24hr) - 318 & 511mg/litre (Daphnia magna), 91.5mg/litre (Daphnia magna)

EC₅₀ (Algae, 24hr) - 1000mg/litre ("plankton algae") - *mixture of several many species* . . .

EC₅₀ (Algae, 72hr) - 672mg/litre (Pseudokirchnerella subcapitata)

EC₅₀ (Bacteria) - 170mg/litre (Pseudomonas putida)¹, >1000mg/litre (*sewage sludge*)

PM Acetate:

Bioaccumulation - rapidly eliminated or metabolised; not a bioaccumulator

Biodegradation - biodegrades readily & rapidly in the presence of oxygen – >90% in 28 days, >99% in 28 days

Abiotic Degradation - hydrolyses at alkaline pH – ½-life 8 days at pH = 9

Mobility in soil, water - water soluble; moves readily in soil and water

Aquatic Toxicity

LC₅₀ (Fish, 96hr) - 161mg/litre (Pimephales promelas); 134mg/litre (Oncorhynchus mykiss), >100mg/litre (Oryzias latipes)

EC₅₀ (Crustacea, 48hr) - 373, 408 & 500mg/litre (Daphnia magna)

EC₅₀ (Algae, 72hr) - >1000mg/litre (Pseudokirchnerella subcapitata & Selenastrum capricornutum)

EC₁₀ (Microorganisms) - >1000mg/litre (*activated sewage sludge*)

tert-Butyl Ether:

Bioaccumulation - not a bioaccumulator

Biodegradation - biodegrades very slowly in the presence of oxygen; <10% in 28 days

Abiotic Degradation - reacts with atmospheric hydroxyl radicals; estimated ½-life in air 7 days

Mobility in soil, water - somewhat water soluble; moves readily in soil and water

Aquatic Toxicity:

LC₅₀ (Fish, 96hr) - 887 & 1237mg/litre (Oncorhynchus mykiss), 672 & 929mg/litre (Pimephelas promelas) & others

EC₅₀ (Crustacea, 48hr) - >100mg/litre (Daphnia magna), >1000mg/litre (Nitocra spinipes)

EC₅₀ (Algae) - >800mg/litre (Scenedesmus subspicatus), 184mg/litre (Selenastrum capricornutum)

Methyl Amyl Ketone:

Bioaccumulation - not a bioaccumulator

Biodegradation - biodegrades readily in the presence of oxygen; 71% in 20days

Abiotic Degradation - reacts with atmospheric hydroxyl radicals; estimated ½-life in air 4.5hr & 15.7hr

Mobility in soil, water - somewhat water soluble; good mobility in soil and water

Aquatic Toxicity

LC₅₀ (Fish, 96hr) - 131mg/litre (Pimephelas promelas)

EC₅₀ (Crustacea, 48hr) - >90mg/litre (Daphnia magna)

EC₅₀ (Algae) - 75.5 & 98mg/litre (Pseudokirchnerella subcapitata)

EC₅₀ (Bacteria) - not known

13. DISPOSAL

Water Disposal

Do not flush to sewer, recycle solvent if possible, local regulations may permit disposal in sanitary landfill, may be incinerated in approved facility after mixing with a suitable flammable waste

Containers

Drums should be reused. Recondition and pressure test by a licensed reconditioner prior to re-use.


Pails must be vented and thoroughly dried prior to crushing and recycling.

IBCs (intermediate bulk containers): polyethylene bottle must be pressure tested & recertified at 30 months. Replace at 60 months (5yrs).

Steel containers must be inspected, pressure tested & recertified every 5 years.

Never cut, drill, weld or grind on or near this container, even if empty

14. TRANSPORT CLASSIFICATION

Canada TDG and	PIN	UN1263	
AND	Shipping Name	Paint Related Materials	
U.S.A. 49 CFR	Class & Packing Group	3, PG II	

OR: UN1993, Flammable Liquid, n.o.s. (Acetone, Toluene) 3, PG II

Marine Pollutant ERAP Required Reportable Quantity E R G No.	Not a Marine Pollutant NO 1000 lbs (454 kg) 128	
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Important Note: Shipping descriptions may vary based on mode of transport, quantities, package size, and/or origin and destination. Consult your company's Hazardous Materials/Dangerous Goods expert for information specific to your situation.

15. REGULATIONS

Canada DSL	On Inventory
U.S.A. TSCA	On Inventory
Europe EINECS	On Inventory

Canadian Regulations

CEPA - National Pollutant Release Inventory (NPRI)
Part 1A

U.S.A. Regulations

CAS	Chemical Name	Regulation List
0000064-17-5	ETHYL ALCOHOL	SARA312, VOC, TSCA
0000067-56-1	METHANOL	CERCLA, HAPS, SARA312, SARA313, VHAPS, VOC, TSCA, RCRA, CA Prop65 - California Proposition 65, CA Prop65 Type Toxicity Develop – CA Proposition 65 Type Toxicity Developmental
0000067-63-0	ISOPROPANOL	SARA312, SARA313, VOC, TSCA
0000067-64-1	ACETONE	CERCLA, SARA312, VOC exempt, TSCA, RCRA
0000071-23-8	PROPANOL	SARA312, VOC, TSCA
0000071-36-3	N-BUTYL ALCOHOL	CERCLA, SARA312, SARA313, VOC, TSCA, RCRA
0000078-93-3	METHYL ETHYL KETONE	CERCLA, SARA312, VOC, TSCA, RCRA
0000078-83-1	ISOBUTYL ALCOHOL	CERCLA, VOC, TSCA, RCRA

0000107-98-2	GLYCOL ETHER PM	SARA312, VOC, TSCA
0000108-65-6	PM ACETATE	SARA312, VOC, TSCA
0000108-88-3	TOLUENE	CERCLA, HAPS, SARA312, SARA313, VHAPS, VOC, TSCA, RCRA, CA Prop65 - California Proposition 65, CA Prop65 Type Toxicity Develop – CA Proposition 65 Type Toxicity Developmental
0000540-88-5	TERT-BUTYL ACETATE	SARA 302/304, SARA313, TSCA
0000110-43-0	METHYL AMY KETONE	SARA311/312, TSCA
0000109-60-4	PROPYL ACETATE	CERCLA, SARA313, TSCA, CA Prop65 - California Proposition 65– known to cause cancer, and to cause birth defects, or other reproductive hazards
0000110-82-7	CYCLOHEXANE	CERCLA, SARA313, VOC, TSCA, RCRA, , CA Prop65 - California Proposition 65 – known to cause cancer
0000071-36-3	BUTANOL	
0000108-10-1	METHYL ISOBUTYL KETONE	CERCLA, VOC, TSCA, RCRA
0000109-99-9	TETRAHYDRO- FURAN	CERCLA, SARA312, VOC, TSCA, RCRA
0000123-86-4	BUTYL ACETATE	CERCLA, SARA312, VOC, TSCA
0000141-78-6	ETHYL ACETATE	CERCLA, SARA312, VOC, TSCA, RCRA
0000142-82-5	N-HEPTANE	SARA312, VOC, TSCA
0001330-20-7	XYLENE	CERCLA, HAPS, SARA312, SARA313, VHAPS, VOC, TSCA, RCRA
0000079-20-9	METHYL ACETATE	VOC, TSCA
0008032-32-4	NAPHTHA, VM&P	SARA312, VOC, TSCA, TSCA UVCB - CHEMICAL SUBSTANCES OF UNKNOWN OR VARIABLE COMPOSITION, COMPLEX REACTION PRODUCTS AND BIOLOGICAL MATERIALS

16. OTHER INFORMATION

NFPA RATING	Health 1	Flammability 3	Instability 0
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Prepared for Megaloid Laboratories Limited by Richard Koscher

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Revision Dates: April 2018, Feb 2019

Key to Abbreviations	ACGIH® = American Conference of Governmental Industrial Hygienists AIHA® = AIHA® Guideline Foundation HSDB® = Hazardous Substances Data Bank IARC = International Agency for Research on Cancer NFPA = National Fire Protection Association NIOSH = National Institute for Occupational Safety and Health NIOSH = National Institute for Occupational Safety and Health NTP = National Toxicology Program OSHA = US Occupational Safety and Health Administration RTECS® = Registry of Toxic Effects of Chemical Substances
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References	CHEMINFO database. Canadian Centre for Occupational Health and Safety (CCOHS). HSDB® database. US National Library of Medicine. Available from Canadian Centre for Occupational Health and Safety (CCOHS). NIOSH Pocket Guide database. National Institute for Occupational Safety and Health. Available from Canadian Centre for Occupational Health and Safety (CCOHS). Registry of Toxic Effects of Chemical Substances (RTECS®) database. Dassault Systèmes/BIOVIA (“BIOVIA”). Available from Canadian Centre for Occupational Health and Safety (CCOHS).
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