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		Asp. Tox. 1; H304	
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SECTION 4. FIRST AID MEASURES

- General advice : Move out of dangerous area.
Call a POISON CENTRE or doctor/physician if exposed or you feel unwell.
Show this safety data sheet to the doctor in attendance.
Symptoms of poisoning may appear several hours later.
Do not leave the victim unattended.
- If inhaled : Move to fresh air.
If unconscious place in recovery position and seek medical advice.
Consult a physician after significant exposure.
- In case of skin contact : Remove contaminated clothing. If irritation develops, get medical attention.
If on skin, rinse well with water.
Wash contaminated clothing before re-use.
- In case of eye contact : Flush eyes with water as a precaution.
Remove contact lenses.
Protect unharmed eye.
If eye irritation persists, consult a specialist.
- If swallowed : Obtain medical attention.
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.
- Most important symptoms and effects, both acute and delayed : Inhalation of high concentrations of this material, as could occur in enclosed spaces or during deliberate abuse, may be associated with cardiac arrhythmias. Sympathomimetic drugs may initiate cardiac arrhythmias in persons exposed to this material.
- Signs and symptoms of exposure to this material through breathing, swallowing, and/or passage of the material through the skin may include:
stomach or intestinal upset (nausea, vomiting, diarrhea)
irritation (nose, throat, airways)
Cough
loss of appetite
confusion
irregular heartbeat
respiratory failure

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May be fatal if swallowed and enters airways.
 May cause drowsiness or dizziness.
 Suspected of causing cancer.
 Suspected of damaging fertility or the unborn child.

Notes to physician : No hazards which require special first aid measures.

SECTION 5. FIREFIGHTING MEASURES

- Suitable extinguishing media : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
 Water spray
 Foam
 Alcohol-resistant foam
 Carbon dioxide (CO2)
 Dry chemical
- Unsuitable extinguishing media : High volume water jet
- Specific hazards during firefighting : Never use welding or cutting torch on or near drum (even empty) because product (even just residue) can ignite explosively.
 Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.
 Do not allow run-off from fire fighting to enter drains or water courses.
- Hazardous combustion products : Aldehydes
 carbon dioxide and carbon monoxide
 organic compounds
 Hydrocarbons
 formaldehyde-like
- Specific extinguishing methods :
 Product is compatible with standard fire-fighting agents.
- Further information : Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.
 Use a water spray to cool fully closed containers.
- Special protective equipment for firefighters : In the event of fire, wear self-contained breathing apparatus.

SECTION 6. ACCIDENTAL RELEASE MEASURES

- Personal precautions, protective equipment and : Evacuate personnel to safe areas.
 Remove all sources of ignition.

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the technological safety standards.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
TOLUENE	108-88-3	TWA	20 ppm	ACGIH
		REL	100 ppm 375 mg/m3	NIOSH/GUID E
		STEL	150 ppm 560 mg/m3	NIOSH/GUID E
		TWA	200 ppm	OSHA/Z2
		Ceiling	300 ppm	OSHA/Z2
		MAX. CONC	500 ppm	OSHA/Z2
SOLVENT NAPHTHA (PETROLEUM), LIGHT ALIPHATIC	64742-89-8	TWA	500 ppm	OSHA_TRANS
		TWA	300 ppm	ACGIH
		TWA	2,000 mg/m3	OSHA_TRANS
		TWA	1,370 mg/m3	ACGIH
ETHYL ETHER	60-29-7	TWA	400 ppm	ACGIH
		STEL	500 ppm	ACGIH
		REL	400 ppm 1,200 mg/m3	OSHA_TRANS
		TWA	400 ppm 1,200 mg/m3	TN OEL
		STEL	500 ppm 1,500 mg/m3	TN OEL
n-HEPTANE	142-82-5	REL	85 ppm 350 mg/m3	NIOSH/GUID E
		Ceil_Time	440 ppm 1,800 mg/m3	NIOSH/GUID E
		REL	500 ppm 2,000 mg/m3	OSHA_TRANS
		TWA	400 ppm	ACGIH
		STEL	500 ppm	ACGIH
		TWA	5,000 ppm	ACGIH
CARBON DIOXIDE	124-38-9	STEL	30,000 ppm	ACGIH
		REL	5,000 ppm 9,000 mg/m3	NIOSH/GUID E
		STEL	30,000 ppm 54,000 mg/m3	NIOSH/GUID E
		REL	5,000 ppm 9,000 mg/m3	OSHA_TRANS
		STEL	5,000 ppm	OSHA_TRANS
ETHANOL	64-17-5	REL	1,000 ppm	NIOSH/GUID

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			1,900 mg/m3	E
		PEL	1,000 ppm 1,900 mg/m3	OSHA_TRANS
		STEL	1,000 ppm	ACGIH
		TWA	1,000 ppm 1,900 mg/m3	Z1A
ETHYL CHLORIDE	75-00-3	TWA	100 ppm	ACGIH
		PEL	1,000 ppm 2,600 mg/m3	OSHA_TRANS
		TWA	1,000 ppm 2,600 mg/m3	Z1A

Biological occupational exposure limits

Components	CAS-No.	Control parameters	Biological specimen	Sampling time	Permissible concentration	Basis
TOLUENE	108-88-3	o-Cresol, with hydrolysis	Creatinine in urine	Sampling time: End of shift.	0.3 mg/g	
Remarks:	Background					
		toluene	Urine	Sampling time: End of shift.	0.03 mg/l	
		toluene	Blood	Sampling time: Prior to last shift of work week.	0.02 mg/l	

Engineering measures : Provide sufficient mechanical (general and/or local exhaust) ventilation to maintain exposure below exposure guidelines (if applicable) or below levels that cause known, suspected or apparent adverse effects.

Personal protective equipment

Respiratory protection : In the case of vapour formation use a respirator with an approved filter.
In the case of dust or aerosol formation use respirator with an approved filter.

A NIOSH-approved air-purifying respirator with an appropriate cartridge and/or filter may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits (if applicable) or if overexposure has otherwise been determined. Protection provided by air-purifying respirators is limited. Use a positive pressure, air-supplied respirator if there is any potential for uncontrolled release, exposure levels are not known or any other circumstances where an air-purifying respirator may not provide adequate protection.

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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 : Not required under normal conditions of use. Wear splash-proof safety goggles if material could be misted or splashed into eyes.
- Skin and body protection : Wear as appropriate:
impervious clothing
Safety shoes
Flame-resistant clothing
Choose body protection according to the amount and concentration of the dangerous substance at the work place.
Wear resistant gloves (consult your safety equipment supplier).
- Hygiene measures : Wash hands before breaks and at the end of workday.
When using do not eat or drink.
When using do not smoke.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

- Physical state : aerosol
- Odour : No data available
- Odour Threshold : No data available
- pH : No data available
- : No data available
- Boiling point/boiling range : 94.3 °F / 34.6 °C
(1,013.232 hPa)
Calculated Phase Transition Liquid/Gas
- Flash point : -49 °F / -45 °C
Calculated Flash Point
- Evaporation rate : No data available
- Flammability (solid, gas) : No data available
- Upper explosion limit : 36.5 %(V)
Calculated Explosive Limit
- Lower explosion limit : 1.05 %(V)
Calculated Explosive Limit
- Vapour pressure : 717.2616 hPa (25 °C)
Calculated Vapor Pressure
- Relative vapour density : No data available
- Relative density : No data available

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Density : 0.7114 g/cm³ (15.56 °C)

Solubility(ies)
Water solubility : No data available

Solubility in other solvents : No data available

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

Thermal decomposition : No data available

Viscosity
Viscosity, dynamic : No data available

Viscosity, kinematic : No data available

Oxidizing properties : No data available

SECTION 10. STABILITY AND REACTIVITY

Reactivity : No decomposition if stored and applied as directed.

Chemical stability : Stable under recommended storage conditions.

Possibility of hazardous reactions : Vapours may form explosive mixture with air.

Conditions to avoid : Heat, flames and sparks.
excessive heat

Incompatible materials : Acids
Alkali metals
Ammonia
Bases
halogens
inorganic materials
Oxidizing agents
sodium
Sulphur compounds

Hazardous decomposition products : Aldehydes
carbon dioxide and carbon monoxide
formaldehyde-like
Hydrocarbons
organic compounds

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SECTION 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure :

- Inhalation
- Skin contact
- Eye Contact
- Ingestion

Acute toxicity

Not classified based on available information.

Components:

SOLVENT NAPHTHA (PETROLEUM), LIGHT ALIPHATIC:

Acute oral toxicity : LD 50 (Rat): > 8,000 mg/kg

Acute inhalation toxicity : LC 50 (Rat): 3400 ppm
 Exposure time: 4 h
 Test atmosphere: vapour

Acute dermal toxicity : LD 50 (Rat): > 4,000 mg/kg

ETHYL ETHER:

Acute oral toxicity : LD50 (Rat): 1,200 - 1,700 mg/kg

Acute inhalation toxicity : LC 50 (Rat): 32,000 mg/l
 Exposure time: 4 h

n-HEPTANE:

Acute oral toxicity : LD 50 (Rat): Expected > 5,000 mg/kg
 Remarks: Information given is based on data obtained from similar substances.

Acute inhalation toxicity : LC 50 (Rat, male and female): > 29.29 mg/l
 Exposure time: 4 h
 Test atmosphere: vapour
 Method: OECD Test Guideline 403
 Assessment: No adverse effect has been observed in acute inhalation toxicity tests.

Acute dermal toxicity : LD 50 (Rabbit): Expected > 2,000 mg/kg
 Assessment: Not classified as acutely toxic by dermal absorption under GHS.
 Remarks: Information given is based on data obtained from similar substances.

ETHANOL:

Acute oral toxicity : LD 50 (Rat): 7,060 mg/kg

Acute inhalation toxicity : LC 50 (Rat): 117 - 125 mg/l
 Exposure time: 4 h

LC 50 (Mouse): 39 mg/l
 Exposure time: 4 h

Acute dermal toxicity : LD Lo (Rabbit): 20 g/kg

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ETHYL CHLORIDE:

Acute inhalation toxicity : LC 50 (Rat): > 19000 ppm
 Exposure time: 4 h
 Test atmosphere: vapour
 Method: OECD Test Guideline 403

TOLUENE:

Acute oral toxicity : LD 50 (Rat): > 5,000 mg/kg
 Acute inhalation toxicity : LC 50 (Rat): 8000 ppm
 Exposure time: 4 h
 Acute dermal toxicity : LD 50 (Rabbit): 12,124 mg/kg

Skin corrosion/irritation

Not classified based on available information.

Product:

Result: Repeated exposure may cause skin dryness or cracking.

Components:

SOLVENT NAPHTHA (PETROLEUM), LIGHT ALIPHATIC:
 Result: Mildly irritating to skin

ETHYL ETHER:

Result: Irritating to skin

n-HEPTANE:

Result: Irritating to skin

CARBON DIOXIDE:

Result: Not irritating to skin

ETHANOL:

Result: Slightly irritating to skin

ETHYL CHLORIDE:

Result: Mildly irritating to skin

TOLUENE:

Result: Irritating to skin

Serious eye damage/eye irritation

Not classified based on available information.

Product:

Remarks: Vapours may cause irritation to the eyes, respiratory system and the skin.

Components:

SOLVENT NAPHTHA (PETROLEUM), LIGHT ALIPHATIC:
 Result: Mildly irritating to eyes

ETHYL ETHER:

Result: Severely irritating to eyes

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n-HEPTANE:
Result: Mildly irritating to eyes

CARBON DIOXIDE:
Result: Not irritating to eyes

ETHANOL:
Result: Irritating to eyes

ETHYL CHLORIDE:
Result: Mildly irritating to eyes

TOLUENE:
Result: Irritating to eyes

Respiratory or skin sensitisation

Skin sensitisation: Not classified based on available information.
Respiratory sensitisation: Not classified based on available information.

Components:

n-HEPTANE:
Test Type: Maximisation Test (GPMT)
Species: Guinea pig
Result: Did not cause sensitisation on laboratory animals.

Germ cell mutagenicity

Not classified based on available information.

Components:

n-HEPTANE:
Genotoxicity in vitro : Test Type: Chromosome aberration test in vitro
Test species: rat hepatocytes
Method: OECD Test Guideline 473
Result: negative

: Test Type: Ames test
Method: OECD Test Guideline 471
Result: negative

Carcinogenicity

Suspected of causing cancer.

Components:

ETHYL CHLORIDE:
Carcinogenicity - Assessment : Limited evidence of carcinogenicity in animal studies

Reproductive toxicity

Suspected of damaging fertility or the unborn child.

Components:

TOLUENE:
Reproductive toxicity - Assessment : Some evidence of adverse effects on sexual function and fertility, and/or on development, based on animal experiments.

STOT - single exposure

May cause drowsiness or dizziness.

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Components:

ETHYL ETHER:

Assessment: May cause drowsiness or dizziness.

n-HEPTANE:

Assessment: May cause drowsiness or dizziness.

ETHANOL:

Assessment: May cause drowsiness or dizziness.

TOLUENE:

Exposure routes: Inhalation

Target Organs: Central nervous system

Assessment: May cause drowsiness or dizziness.

STOT - repeated exposure

Not classified based on available information.

Components:

TOLUENE:

Exposure routes: Inhalation

Target Organs: Neurologic: other (neuropsychological effects, auditory dysfunction and effects on colour vision)

Assessment: May cause damage to organs through prolonged or repeated exposure.

Aspiration toxicity

May be fatal if swallowed and enters airways.

Product:

May be fatal if swallowed and enters airways.

Components:

SOLVENT NAPHTHA (PETROLEUM), LIGHT ALIPHATIC:

May be fatal if swallowed and enters airways.

n-HEPTANE:

May be fatal if swallowed and enters airways.

TOLUENE:

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.

Components:

ETHYL CHLORIDE:

Remarks: Liver

Remarks: Central nervous system

Carcinogenicity:

IARC

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

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human carcinogen by IARC.

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.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

n-HEPTANE:

Toxicity to daphnia and other aquatic invertebrates : EC 50 (Water flea (Daphnia magna)): 1.5 mg/l
 Exposure time: 48 h
 Test Type: static test

LC 50 (Mysidopsis bahia (opossum shrimp)): 0.1 mg/l
 Exposure time: 96 h
 Test Type: semi-static test

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOELR (Water flea (Daphnia magna)): 1 mg/l
 Exposure time: 21 d
 Test Type: static test
 Test substance: WAF
 Method: OECD Test Guideline 211
 Remarks: Information given is based on data obtained from similar substances.

Ecotoxicology Assessment

Acute aquatic toxicity : Very toxic to aquatic life.

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

ETHANOL:

Toxicity to fish : LC 50 (Rainbow trout,donaldson trout (Oncorhynchus mykiss)): 12,000 - 16,000 mg/l
 Exposure time: 96 h
 Test Type: static test

Toxicity to daphnia and other aquatic invertebrates : EC 50 (Water flea (Daphnia magna)): > 10,000 mg/l
 Exposure time: 48 h
 Test Type: static test

ETHYL CHLORIDE:

Toxicity to daphnia and other aquatic invertebrates : EC50 (Water flea (Daphnia magna)): 58 mg/l
 Exposure time: 48 h
 Test Type: static test
 Method: Directive 67/548/EEC, Annex V, C.2.

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Toxicity to algae : EC50 (Desmodesmus subspicatus (green algae)): 118 mg/l
 End point: Growth inhibition
 Exposure time: 72 h
 Test Type: static test
 Method: Directive 67/548/EEC, Annex V, C.3.

TOLUENE:

Toxicity to fish : LC50 (Oncorhynchus kisutch (coho salmon)): 5.5 mg/l
 Exposure time: 96 h
 Test Type: flow-through test

Toxicity to daphnia and other aquatic invertebrates : EC50 (Water flea (Ceriodaphnia dubia)): 3.78 mg/l
 Exposure time: 48 h
 Remarks: Mortality

Toxicity to algae : EC50 (Pseudokirchneriella subcapitata (microalgae)): > 433 mg/l
 End point: Growth inhibition
 Exposure time: 96 h

 NOEC (Scenedesmus quadricauda (Green algae)): > 400 mg/l
 End point: Growth inhibition
 Exposure time: 7 d

Toxicity to fish (Chronic toxicity) : NOEC (Oncorhynchus mykiss (rainbow trout)): 1.39 mg/l
 Exposure time: 40 d
 Test Type: flow-through test

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Water flea (Ceriodaphnia dubia)): 0.74 mg/l
 Exposure time: 7 d

Persistence and degradability

n-HEPTANE:

Biodegradability : Result: Readily biodegradable

ETHYL CHLORIDE:

Biodegradability : Inoculum: activated sludge
 Result: Not readily biodegradable.
 Biodegradation: 0 %
 Exposure time: 28 d
 Method: Directive 67/548/EEC Annex V, C.4.E.

TOLUENE:

Biodegradability : Result: Readily biodegradable

Bioaccumulative potential

ETHYL ETHER:

Partition coefficient: n-octanol/water : log Pow: 0.89

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n-HEPTANE:

Partition coefficient: n-octanol/water : log Pow: 4.66

ETHANOL:

Partition coefficient: n-octanol/water : log Pow: -0.31

ETHYL CHLORIDE:

Partition coefficient: n-octanol/water : log Pow: 1.43

TOLUENE:

Bioaccumulation : Species: Ide, silver or golden orfe (Leuciscus idus)
 Bioconcentration factor (BCF): 94
 Exposure time: 3 d
 Concentration: 0.05 mg/l
 Method: Not reported

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

Mobility in soil

No data available

Other adverse effects

No data available

Product:

Additional ecological information : An environmental hazard cannot be excluded in the event of unprofessional handling or disposal., Toxic to aquatic life with long lasting effects.

SECTION 13. DISPOSAL CONSIDERATIONS**Disposal methods**

General advice : The product should not be allowed to enter drains, water courses or the soil.
 Do not contaminate ponds, waterways or ditches with chemical or used container.
 Send to a licensed waste management company.

Dispose of in accordance with all applicable local, state and federal regulations.

Contaminated packaging : Empty remaining contents.
 Empty containers should be taken to an approved waste handling site for recycling or disposal.
 Do not re-use empty containers.
 Do not burn, or use a cutting torch on, the empty drum.

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SECTION 14. TRANSPORT INFORMATION

International transport regulations

REGULATION

ID NUMBER	PROPER SHIPPING NAME	*HAZARD CLASS	SUBSIDIARY HAZARDS	PACKING GROUP	MARINE POLLUTANT / LTD. QTY.
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MEXICAN REGULATION FOR THE LAND TRANSPORT OF HAZARDOUS MATERIALS AND WASTES

UN	1950	Aerosols	2		LIMITED QUANTITY
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INTERNATIONAL AIR TRANSPORT ASSOCIATION - PASSENGER

UN	1950	Aerosols	2.1		LIMITED QUANTITY
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INTERNATIONAL AIR TRANSPORT ASSOCIATION - CARGO

UN	1950	Aerosols	2.1		LIMITED QUANTITY
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INTERNATIONAL MARITIME DANGEROUS GOODS

UN	1950	AEROSOLS	2.1		LIMITED QUANTITY
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TRANSPORT CANADA - INLAND WATERWAYS

UN	1950	AEROSOLS	2.1		LIMITED QUANTITY
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TRANSPORT CANADA - RAIL

UN	1950	AEROSOLS	2.1		LIMITED QUANTITY
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TRANSPORT CANADA - ROAD

UN	1950	AEROSOLS	2.1		MARINE POLLUTANT:(ALIPHATIC PETROLEUM NAPHTHA)LIMITED QUANTITY
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U.S. DOT - INLAND WATERWAYS

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UN	1950	Aerosols, flammable (engine starting fluid)	2.1
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U.S. DOT - RAIL

UN	1950	Aerosols, flammable (engine starting fluid)	2.1
----	------	---	-----

U.S. DOT - ROAD

UN	1950	AEROSOLS	2.1
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*ORM = ORM-D, CBL = COMBUSTIBLE LIQUID

Marine pollutant	yes
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Dangerous goods descriptions (if indicated above) may not reflect quantity, end-use or region-specific exceptions that can be applied. Consult shipping documents for descriptions that are specific to the shipment.

SECTION 15. REGULATORY INFORMATION

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

CERCLA Reportable Quantity

Components	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
ETHYL ETHER	60-29-7	100	511.380779

SARA 311/312 Hazards : Chronic Health Hazard
Fire Hazard
Acute Health Hazard

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

Pennsylvania Right To Know

SOLVENT NAPHTHA (PETROLEUM), LIGHT ALIPHATIC	64742-89-8	70.00 - 90.00 %
ETHYL ETHER	60-29-7	10.00 - 20.00 %
n-HEPTANE	142-82-5	1.00 - 5.00 %
CARBON DIOXIDE	124-38-9	1.00 - 5.00 %
ETHANOL	64-17-5	1.00 - 5.00 %

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New Jersey Right To Know

SOLVENT NAPHTHA (PETROLEUM), LIGHT ALIPHATIC	64742-89-8	70.00 - 90.00 %
ETHYL ETHER	60-29-7	10.00 - 20.00 %
n-HEPTANE	142-82-5	1.00 - 5.00 %
CARBON DIOXIDE	124-38-9	1.00 - 5.00 %
ETHANOL	64-17-5	1.00 - 5.00 %
DISTILLATES (PETROLEUM), HYDROTREATED LIGHT NAPHTHENIC	64742-53-6	0.10 - 1.00 %
TOLUENE	108-88-3	0.10 - 1.00 %

California Prop 65

Proposition 65 warnings are not required for this product based on the results of a risk assessment.

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

- TSCA : On TSCA Inventory
- DSL : All components of this product are on the Canadian DSL.
- AUSTR : On the inventory, or in compliance with the inventory
- ENCS : Not in compliance with the inventory
- KECL : On the inventory, or in compliance with the inventory
- PICCS : On the inventory, or in compliance with the inventory
- IECSC : On the inventory, or in compliance with the inventory

Inventories

AICS (Australia), DSL (Canada), IECSC (China), REACH (European Union), ENCS (Japan), ISHL (Japan), KECL (Korea), NZIoC (New Zealand), PICCS (Philippines), TSCA (USA)

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SECTION 16. OTHER INFORMATION

Further information
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<p>NFPA:</p> <div style="text-align: center;"> <p>Flammability</p> <p>Health Instability</p> <p>Special hazard.</p> </div>	<p>HMIS III:</p> <table border="1" style="width: 100%;"> <tr> <td style="background-color: #cccccc;">HEALTH</td> <td style="text-align: center;">2</td> </tr> <tr> <td style="background-color: #cccccc;">FLAMMABILITY</td> <td style="text-align: center;">4</td> </tr> <tr> <td style="background-color: #cccccc;">PHYSICAL HAZARD</td> <td style="text-align: center;">0</td> </tr> </table> <p>0 = not significant, 1 =Slight, 2 = Moderate, 3 = High 4 = Extreme, * = Chronic</p>	HEALTH	2	FLAMMABILITY	4	PHYSICAL HAZARD	0
HEALTH	2						
FLAMMABILITY	4						
PHYSICAL HAZARD	0						

NFPA Flammable and Combustible Liquids Classification
Not applicable

Full text of H-Statements referred to under sections 2 and 3.

- H220 Extremely flammable gas.
- H224 Extremely flammable liquid and vapor.
- H225 Highly flammable liquid and vapor.
- H280 Contains gas under pressure; may explode if heated.
- H302 Harmful if swallowed.
- 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.
- H373 May cause damage to organs through prolonged or repeated exposure if inhaled.
- H401 Toxic to aquatic life.
- H411 Toxic to aquatic life with long lasting effects.

Sources of key data used to compile the Safety Data Sheet
Ashland internal data including own and sponsored test reports
The UNECE administers regional agreements implementing harmonised classification for labelling (GHS) and transport.

The information accumulated herein is believed to be accurate but is not warranted to be whether originating with the company or not. Recipients are advised to confirm in advance of need that the

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Pyroil™ STARTING FLUID		Version: 1.0
PYSFR11		

information is current, applicable, and suitable to their circumstances. This SDS has been prepared by Ashland's Environmental Health and Safety Department (1-800-325-3751).

List of abbreviations and acronyms that could be, but not necessarily are, used in this safety data sheet :

ACGIH : American Conference of Industrial Hygienists
 BEI : Biological Exposure Index
 CAS : Chemical Abstracts Service (Division of the American Chemical Society).
 CMR : Carcinogenic, Mutagenic or Toxic for Reproduction
 FG : Food grade
 GHS : Globally Harmonized System of Classification and Labeling of Chemicals.
 H-statement : Hazard Statement
 IATA : International Air Transport Association.
 IATA-DGR : Dangerous Goods Regulation by the "International Air Transport Association" (IATA).

ICAO : International Civil Aviation Organization
 ICAO-TI (ICAO) : Technical Instructions by the "International Civil Aviation Organization"
 IMDG : International Maritime Code for Dangerous Goods
 ISO : International Organization for Standardization
 logPow : octanol-water partition coefficient
 LCxx : Lethal Concentration, for xx percent of test population
 LDxx : Lethal Dose, for xx percent of test population.
 ICxx : Inhibitory Concentration for xx of a substance
 Ecxx : Effective Concentration of xx
 N.O.S.: Not Otherwise Specified
 OECD : Organization for Economic Co-operation and Development
 OEL : Occupational Exposure Limit
 P-Statement : Precautionary Statement
 PBT : Persistent , Bioaccumulative and Toxic
 PPE : Personal Protective Equipment
 STEL : Short-term exposure limit
 STOT : Specific Target Organ Toxicity
 TLV : Threshold Limit Value
 TWA : Time-weighted average
 vPvB : Very Persistent and Very Bioaccumulative
 WEL : Workplace Exposure Level

CERCLA : Comprehensive Environmental Response, Compensation, and Liability Act
 DOT : Department of Transportation
 FIFRA : Federal Insecticide, Fungicide, and Rodenticide Act
 HMIRC : Hazardous Materials Information Review Commission
 HMIS : Hazardous Materials Identification System
 NFPA : National Fire Protection Association
 NIOSH : National Institute for Occupational Safety and Health
 OSHA : Occupational Safety and Health Administration
 PMRA : Health Canada Pest Management Regulatory Agency
 RTK : Right to Know
 WHMIS : Workplace Hazardous Materials Information System

Material Safety Data Sheet

CHEMICAL VULCANIZING FLUID



1. Product and company identification

Product name	: CHEMICAL VULCANIZING FLUID
Supplier	: Same as manufacturer.au supplier
Synonym	: 760, 761, 762, 763, 764, 765, 766, 767
Trade name	: Tech Chemical Vulcanizing Fluid
Material uses	: Consumer products: rubber adhesive Industrial applications: rubber adhesive
Manufacturer	: Tech International, 200 E. Coshocton St., Johnstown, Ohio 43031, 740-967-9015
Code	: 760, 761, 762, 763, 764, 765, 766, 767
MSDS #	: 760
Validation date	: 2/27/2014.
Print date	: 2/27/2014.
<u>In case of emergency</u>	: Chemtrec 1-800-424-9300 (24hrs) CHEMTREC Brazil (Rio De Janeiro): +(55)-2139581449 CHEMTREC Mexico: 01-800-681-9531 CHEMTREC Russia: 8-800-100-6346
Product type	: Liquid.

2. Hazards identification

Emergency overview

Physical state	: Liquid.
Color	: Tan. [Light]
Odor	: Solvent. [Strong]
Signal word	: DANGER!
Hazard statements	: EXTREMELY FLAMMABLE LIQUID AND VAPOR. FLAMMABLE. VAPOR MAY CAUSE FLASH FIRE. CAUSES SKIN IRRITATION. MAY CAUSE EYE IRRITATION. CONTAINS MATERIAL THAT MAY CAUSE TARGET ORGAN DAMAGE, BASED ON ANIMAL DATA.
Precautionary measures	: Do not breathe vapor or mist. Use only with adequate ventilation. Do not eat, drink or smoke when using this product. Avoid contact with eyes, skin and clothing. Keep away from heat, sparks and flame. Keep container tightly closed. Wash thoroughly after handling.
Routes of entry	: Not available.

Potential acute health effects

Inhalation	: Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.
Ingestion	: No known significant effects or critical hazards.
Skin	: Irritating to skin.
Eyes	: Slightly irritating to the eyes.

Potential chronic health effects

Chronic effects	: Contains material that may cause target organ damage, based on animal data.
Carcinogenicity	: No known significant effects or critical hazards.
Mutagenicity	: No known significant effects or critical hazards.
Teratogenicity	: No known significant effects or critical hazards.
Developmental effects	: No known significant effects or critical hazards.
Fertility effects	: No known significant effects or critical hazards.

2. Hazards identification

Target organs : Contains material which may cause damage to the following organs: cardiovascular system, upper respiratory tract, central nervous system (CNS).

Over-exposure signs/symptoms

Inhalation : No specific data.

Ingestion : No specific data.

Skin : Adverse symptoms may include the following:
irritation
redness

Eyes : Adverse symptoms may include the following:
irritation
watering
redness

Medical conditions aggravated by over-exposure : Pre-existing disorders involving any target organs mentioned in this MSDS as being at risk may be aggravated by over-exposure to this product.

See toxicological information (Section 11)

3. Composition/information on ingredients

Name	CAS number	%
solvent naphtha (petroleum), light aliph.	64742-89-8	90 - 96

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

4. First aid measures

- Eye contact** : Check for and remove any contact lenses. Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical attention immediately.
- Skin contact** : In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Clean shoes thoroughly before reuse. Get medical attention immediately.
- Inhalation** : Move exposed person to fresh air. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention immediately.
- Ingestion** : Wash out mouth with water. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention immediately.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.
- Notes to physician** : In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

5. Fire-fighting measures

Flammability of the product : Extremely flammable liquid. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. The vapor/gas is heavier than air and will spread along the ground. Vapors may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back. Runoff to sewer may create fire or explosion hazard.

Extinguishing media

Suitable : Use dry chemical, CO₂, water spray (fog) or foam.

Not suitable : Do not use water jet.

Special exposure hazards : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

Hazardous thermal decomposition products : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
nitrogen oxides
sulfur oxides
metal oxide/oxides

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Special remarks on fire hazards : Not available.

Special remarks on explosion hazards : Not available.

6. Accidental release measures

Personal precautions : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see Section 8).

Environmental precautions : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods for cleaning up

Small spill : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Large spill : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

7. Handling and storage

- Handling** : Put on appropriate personal protective equipment (see Section 8). Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapor or mist. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Take precautionary measures against electrostatic discharges. To avoid fire or explosion, dissipate static electricity during transfer by grounding and bonding containers and equipment before transferring material. Empty containers retain product residue and can be hazardous. Do not reuse container.
- Storage** : Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

8. Exposure controls/personal protection

<u>Occupational exposure limits</u>		TWA (8 hours)			STEL (15 mins)			Ceiling			Notations
Ingredient	List name	ppm	mg/m ³	Other	ppm	mg/m ³	Other	ppm	mg/m ³	Other	
solvent naphtha (petroleum blend), light	US ACGIH	400	-	-	-	-	-	-	-	-	
	Rubber	US ACGIH 3/2012	-	0.0001	-	-	-	-	-	-	[1][3] [a]
, Inhalable allergenic proteins	Rubber	AB 4/2009	-	0.001	-	-	-	-	-	-	[1]
	, as total proteins	BC 4/2012	-	0.001	-	-	-	-	-	-	[1][3] [b]
Rubber	ON 7/2010	-	0.0001	-	-	-	-	-	-	-	[1][3] [a]
, Inhalable allergenic proteins											

[1]Absorbed through skin. [3]Skin sensitization

Form: [a]Inhalable fraction [b]Inhalable

Consult local authorities for acceptable exposure limits.

- Recommended monitoring procedures** : If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to appropriate monitoring standards. Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

- Engineering measures** : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

- Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Personal protection

8. Exposure controls/personal protection

Respiratory	: Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.
Hands	: Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.
Eyes	: Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles.
Skin	: Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves.
Environmental exposure controls	: Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.
Other protection	: Not available.
Personal protective equipment (Pictograms)	: Not available.

9. Physical and chemical properties

Physical state	: Liquid.
Flash point	: Closed cup: -7°C (19.4°F) [Tagliabue.]
Burning time	: Not applicable.
Burning rate	: Not applicable.
Auto-ignition temperature	: 280°C (536°F)
Flammable limits	: Lower: 1.3% Upper: 8%
Color	: Tan. [Light]
Odor	: Solvent. [Strong]
Taste	: Not available.
Molecular weight	: Not applicable.
Molecular formula	: Not applicable.
pH	: Not applicable.
Boiling/condensation point	: 93.333 to 115.56°C (200 to 240°F)
Melting/freezing point	: Not available.
Critical temperature	: Not available.
Relative density	: 0.74
Vapor pressure	: 5.3 kPa (40 mm Hg) [room temperature]
Vapor density	: >1 [Air = 1]
Volatility	: 92.7% (w/w)

9. Physical and chemical properties

Odor threshold	: Not available.
Evaporation rate	: >1 (butyl acetate = 1)
SADT	: Not available.
Viscosity	: Dynamic (room temperature): 400 mPa·s (400 cP)
Ionicity (in water)	: Not available.
Dispersibility properties	: Not available.
Solubility	: Not available.
Physical/chemical properties comments	: Not available.

10. Stability and reactivity

Chemical stability	: The product is stable.
Conditions to avoid	: Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition. Do not allow vapor to accumulate in low or confined areas.
Incompatible materials	: Highly reactive or incompatible with the following materials: oxidizing materials
Hazardous decomposition products	: Under normal conditions of storage and use, hazardous decomposition products should not be produced.
Possibility of hazardous reactions	: Under normal conditions of storage and use, hazardous reactions will not occur.

11. Toxicological information

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
solvent naphtha (petroleum blend), light	LC50 Inhalation Gas.	Rat	3400 ppm	4 hours
	LD50 Dermal	Rat	>4000 mg/kg	-
	LD50 Oral	Rat	>8000 mg/kg	-

Conclusion/Summary : Not available.

Chronic toxicity

Not available.

Conclusion/Summary : Not available.

Irritation/Corrosion

Not available.

Conclusion/Summary : Not available.

Sensitizer

Not available.

Conclusion/Summary : Not available.

Carcinogenicity

Not available.

Conclusion/Summary : Not available.

Classification

Not available.

Mutagenicity

11. Toxicological information

Not available.

Conclusion/Summary : Not available.

Teratogenicity

Not available.

Conclusion/Summary : Not available.

Reproductive toxicity

Not available.

Conclusion/Summary : Not available.

Synergistic products : Not available.

12. Ecological information

Ecotoxicity : No known significant effects or critical hazards.

Aquatic ecotoxicity

Not available.

Conclusion/Summary : Not available.

Persistence/degradability

Not available.

Conclusion/Summary : Not available.

Partition coefficient: n-octanol/water : Not available.

Bioconcentration factor : Not available.

Mobility : Not available.

Toxicity of the products of biodegradation : Not available.

Other adverse effects : No known significant effects or critical hazards.

13. Disposal considerations

Waste disposal : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Vapor from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Waste stream : Not available.

RCRA classification : Not available.

Disposal should be in accordance with applicable regional, national and local laws and regulations.

Refer to Section 7: HANDLING AND STORAGE and Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for additional handling information and protection of employees.