

ASHLAND®		Page: 1
SAFETY DATA SHEET		Revision Date: 05/23/2015
		Print Date: 7/15/2015
		SDS Number: R0340954
Pyroil™ STARTING FLUID		Version: 1.0
PYSFR11		

29 CFR 1910.1200 (OSHA HazCom 2012)

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product identifier

Trade name : Pyroil™
STARTING FLUID

Recommended use of the chemical and restrictions on use

Details of the supplier of the safety data sheet Ashland P.O. Box 2219 Columbus, OH 43216 United States of America EHS Customer Requests@ashland.com	Emergency telephone number 1-800-ASHLAND (1-800-274-5263) Regulatory Information Number 1-800-325-3751 Product Information 614-790-3333
--	---

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification

Flammable aerosols : Category 1
 Carcinogenicity : Category 2
 Reproductive toxicity : Category 2
 Specific target organ systemic toxicity - single exposure : Category 3 (Central nervous system)
 Aspiration hazard : Category 1

GHS Label element

Hazard pictograms : 

Signal Word : Danger

Hazard Statements : Extremely flammable aerosol.
 May be fatal if swallowed and enters airways.
 May cause drowsiness or dizziness.
 Suspected of causing cancer.

ASHLAND®		Page: 2
SAFETY DATA SHEET		Revision Date: 05/23/2015
		Print Date: 7/15/2015
		SDS Number: R0340954
Pyroil™ STARTING FLUID		Version: 1.0
PYSFR11		

Suspected of damaging fertility or the unborn child.

Precautionary Statements

: Prevention:

Obtain special instructions before use.
 Do not handle until all safety precautions have been read and understood.
 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
 Do not spray on an open flame or other ignition source.
 Pressurized container: Do not pierce or burn, even after use.
 Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray.
 Use only outdoors or in a well-ventilated area.
 Wear protective gloves/ protective clothing/ eye protection/ face protection.

Response:

IF SWALLOWED: Immediately call a POISON CENTER or doctor/ physician.
 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor/ physician if you feel unwell.
 IF exposed or concerned: Get medical advice/ attention.
 Do NOT induce vomiting.

Storage:

Store in a well-ventilated place. Keep container tightly closed.
 Store locked up.
 Protect from sunlight. Do not expose to temperatures exceeding 50 °C/ 122 °F.

Disposal:

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

Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Chemical nature : Defatter

Hazardous components

Chemical Name	CAS-No.	Classification	Concentration (%)
SOLVENT NAPHTHA (PETROLEUM), LIGHT ALIPHATIC	64742-89-8	Flam. Liq. 2; H225 STOT SE 3; H336 Asp. Tox. 1; H304 Aquatic Acute 2; H401 Aquatic Chronic 2;	77.53

SAFETY DATA SHEET

Revision Date: 05/23/2015

Print Date: 7/15/2015

SDS Number: R0340954

Pyroil™ STARTING FLUID

Version: 1.0

PYSFR11

		H411	
ETHYL ETHER	60-29-7	Flam. Liq. 1; H224 Acute Tox. 4; H302 STOT SE 3; H336	19.55
n-HEPTANE	142-82-5	Flam. Liq. 2; H225 Skin Irrit. 2; H315 STOT SE 3; H336 Asp. Tox. 1; H304	3.10
CARBON DIOXIDE	124-38-9	Press. Gas Liquefied gas; H280	2.01
ETHANOL	64-17-5	Flam. Liq. 2; H225 Eye Irrit. 2A; H319 STOT SE 3; H336	1.17
ETHYL CHLORIDE	75-00-3	Flam. Gas 1; H220 Carc. 2; H351	0.29
TOLUENE	108-88-3	Flam. Liq. 2; H225 Skin Irrit. 2; H315 Eye Irrit. 2A; H319 Repr. 2; H361 STOT SE 3; H336 STOT RE 2; H373	0.13

ASHLAND®		Page: 4
SAFETY DATA SHEET		Revision Date: 05/23/2015
		Print Date: 7/15/2015
		SDS Number: R0340954
Pyroil™ STARTING FLUID		Version: 1.0
PYSFR11		

		Asp. Tox. 1; H304	
--	--	-------------------	--

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

ASHLAND®		Page: 5
SAFETY DATA SHEET		Revision Date: 05/23/2015
		Print Date: 7/15/2015
		SDS Number: R0340954
Pyroil™ STARTING FLUID		Version: 1.0
PYSFR11		

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.

ASHLAND®		Page: 6
SAFETY DATA SHEET		Revision Date: 05/23/2015
		Print Date: 7/15/2015
		SDS Number: R0340954
Pyroil™ STARTING FLUID		Version: 1.0
PYSFR11		

- emergency procedures Use personal protective equipment.
 Ensure adequate ventilation.
 Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.
 Persons not wearing protective equipment should be excluded from area of spill until clean-up has been completed.
- 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 : Suppress (knock down) gases/vapours/mists with a water spray jet.
 Contain spillage, soak up with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and transfer to a container for disposal according to local / national regulations (see section 13).
- Other information : Comply with all applicable federal, state, and local regulations.
 Suppress (knock down) gases/vapours/mists with a water spray jet.

SECTION 7. HANDLING AND STORAGE

- Advice on safe handling : Open drum carefully as content may be under pressure.
 Provide sufficient air exchange and/or exhaust in work rooms.
 Do not breathe vapours/dust.
 Do not smoke.
 Container hazardous when empty.
 Take precautionary measures against static discharges.
 Avoid exposure - obtain special instructions before use.
 Avoid contact with skin and eyes.
 Smoking, eating and drinking should be prohibited in the application area.
 For personal protection see section 8.
 Dispose of rinse water in accordance with local and national regulations.
 Container may be opened only under exhaust ventilation hood.
- Conditions for safe storage : BEWARE: Aerosol is pressurized. Keep away from direct sun exposure and temperatures over 50 °C. Do not open by force or throw into fire even after use. Do not spray on flames or red-hot objects.
 Keep container tightly closed in a dry and well-ventilated place.
 Containers which are opened must be carefully resealed and kept upright to prevent leakage.
 Observe label precautions.
 No smoking.
 Electrical installations / working materials must comply with

ASHLAND®		Page: 7
SAFETY DATA SHEET		Revision Date: 05/23/2015
		Print Date: 7/15/2015
		SDS Number: R0340954
Pyroil™ STARTING FLUID		Version: 1.0
PYSFR11		

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/GUIDE
		STEL	150 ppm 560 mg/m3	NIOSH/GUIDE
		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
		TWA	400 ppm	ACGIH
		STEL	500 ppm	ACGIH
ETHYL ETHER	60-29-7	PEL	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
		REL	85 ppm 350 mg/m3	NIOSH/GUIDE
		Ceil_Time	440 ppm 1,800 mg/m3	NIOSH/GUIDE
		PEL	500 ppm 2,000 mg/m3	OSHA_TRANS
CARBON DIOXIDE	124-38-9	TWA	400 ppm	ACGIH
		STEL	500 ppm	ACGIH
		TWA	5,000 ppm	ACGIH
		STEL	30,000 ppm	ACGIH
		REL	5,000 ppm 9,000 mg/m3	NIOSH/GUIDE
		STEL	30,000 ppm 54,000 mg/m3	NIOSH/GUIDE
ETHANOL	64-17-5	PEL	5,000 ppm 9,000 mg/m3	OSHA_TRANS
		REL	1,000 ppm	NIOSH/GUIDE

SAFETY DATA SHEET

Revision Date: 05/23/2015

Print Date: 7/15/2015

SDS Number: R0340954

Pyroil™ STARTING FLUID

Version: 1.0

PYSFR11

			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.

ASHLAND®		Page: 9
SAFETY DATA SHEET		Revision Date: 05/23/2015
		Print Date: 7/15/2015
		SDS Number: R0340954
Pyroil™ STARTING FLUID		Version: 1.0
PYSFR11		

- 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

ASHLAND®		Page: 10
SAFETY DATA SHEET		Revision Date: 05/23/2015
		Print Date: 7/15/2015
		SDS Number: R0340954
Pyroil™ STARTING FLUID		Version: 1.0
PYSFR11		

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

ASHLAND®		Page: 11
SAFETY DATA SHEET		Revision Date: 05/23/2015
		Print Date: 7/15/2015
		SDS Number: R0340954
Pyroil™ STARTING FLUID		Version: 1.0
PYSFR11		

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

ASHLAND®		Page: 12
SAFETY DATA SHEET		Revision Date: 05/23/2015
		Print Date: 7/15/2015
		SDS Number: R0340954
Pyroil™ STARTING FLUID		Version: 1.0
PYSFR11		

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

ASHLAND®		Page: 13
SAFETY DATA SHEET		Revision Date: 05/23/2015
		Print Date: 7/15/2015
		SDS Number: R0340954
Pyroil™ STARTING FLUID		Version: 1.0
PYSFR11		

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.

ASHLAND®		Page: 14
SAFETY DATA SHEET		Revision Date: 05/23/2015
		Print Date: 7/15/2015
		SDS Number: R0340954
Pyroil™ STARTING FLUID		Version: 1.0
PYSFR11		

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

ASHLAND®		Page: 15
SAFETY DATA SHEET		Revision Date: 05/23/2015
		Print Date: 7/15/2015
		SDS Number: R0340954
Pyroil™ STARTING FLUID		Version: 1.0
PYSFR11		

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.

ASHLAND®		Page: 16
SAFETY DATA SHEET		Revision Date: 05/23/2015
		Print Date: 7/15/2015
		SDS Number: R0340954
Pyroil™ STARTING FLUID		Version: 1.0
PYSFR11		

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

ASHLAND®		Page: 17
SAFETY DATA SHEET		Revision Date: 05/23/2015
		Print Date: 7/15/2015
		SDS Number: R0340954
Pyroil™ STARTING FLUID		Version: 1.0
PYSFR11		

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.

SAFETY DATA SHEET

Revision Date: 05/23/2015

Print Date: 7/15/2015

SDS Number: R0340954

Pyroil™ STARTING FLUID

Version: 1.0

PYSFR11

SECTION 14. TRANSPORT INFORMATION

International transport regulations

REGULATION

ID NUMBER	PROPER SHIPPING NAME	*HAZARD CLASS	SUBSIDIARY HAZARDS	PACKING GROUP	MARINE POLLUTANT / LTD. QTY.
-----------	----------------------	---------------	--------------------	---------------	------------------------------

MEXICAN REGULATION FOR THE LAND TRANSPORT OF HAZARDOUS MATERIALS AND WASTES

UN	1950	Aerosols	2		LIMITED QUANTITY
----	------	----------	---	--	------------------

INTERNATIONAL AIR TRANSPORT ASSOCIATION - PASSENGER

UN	1950	Aerosols	2.1		LIMITED QUANTITY
----	------	----------	-----	--	------------------

INTERNATIONAL AIR TRANSPORT ASSOCIATION - CARGO

UN	1950	Aerosols	2.1		LIMITED QUANTITY
----	------	----------	-----	--	------------------

INTERNATIONAL MARITIME DANGEROUS GOODS

UN	1950	AEROSOLS	2.1		LIMITED QUANTITY
----	------	----------	-----	--	------------------

TRANSPORT CANADA - INLAND WATERWAYS

UN	1950	AEROSOLS	2.1		LIMITED QUANTITY
----	------	----------	-----	--	------------------

TRANSPORT CANADA - RAIL

UN	1950	AEROSOLS	2.1		LIMITED QUANTITY
----	------	----------	-----	--	------------------

TRANSPORT CANADA - ROAD

UN	1950	AEROSOLS	2.1		MARINE POLLUTANT:(ALIPHATIC PETROLEUM NAPHTHA)LIMITED QUANTITY
----	------	----------	-----	--	--

U.S. DOT - INLAND WATERWAYS

ASHLAND®		Page: 19
SAFETY DATA SHEET		Revision Date: 05/23/2015
		Print Date: 7/15/2015
		SDS Number: R0340954
Pyroil™ STARTING FLUID		Version: 1.0
PYSFR11		

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

U.S. DOT - RAIL

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

U.S. DOT - ROAD

UN	1950	AEROSOLS	2.1
----	------	----------	-----

*ORM = ORM-D, CBL = COMBUSTIBLE LIQUID

Marine pollutant	yes
------------------	-----

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)SARA 313 : 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 %

ASHLAND®		Page: 20
SAFETY DATA SHEET		Revision Date: 05/23/2015
		Print Date: 7/15/2015
		SDS Number: R0340954
Pyroil™ STARTING FLUID		Version: 1.0
PYSFR11		

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), KECI (Korea), NZIoC (New Zealand), PICCS (Philippines), TSCA (USA)

ASHLAND®		Page: 21
SAFETY DATA SHEET		Revision Date: 05/23/2015
		Print Date: 7/15/2015
		SDS Number: R0340954
Pyroil™ STARTING FLUID		Version: 1.0
PYSFR11		

SECTION 16. OTHER INFORMATION

Further information

Revision Date: 05/23/2015

NFPA:	HMIS III:						
<p>Flammability</p> <p>Health</p> <p>Instability</p> <p>Special hazard.</p>	<table border="1"> <tr> <td>HEALTH</td> <td>2</td> </tr> <tr> <td>FLAMMABILITY</td> <td>4</td> </tr> <tr> <td>PHYSICAL HAZARD</td> <td>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

ASHLAND®		Page: 22
SAFETY DATA SHEET		Revision Date: 05/23/2015
		Print Date: 7/15/2015
		SDS Number: R0340954
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