SPOTLEAK® 1007

1. PRODUCT AND COMPANY IDENTIFICATION

Company

Arkema Canada Inc.
1100 Burloak Drive, Suite 107
Burlington, Ontario, L7L 6B2

Thio and Fine Chemicals

Customer Service Telephone Number: (800) 567-5726
(Monday through Friday, 8:30 AM to 4:30 PM EST)

Emergency Information

Transportation: CANUTEC: (613) 996-6666
(24 hrs., 7 days a week)
Medical: Rocky Mountain Poison Center: (866) 767-5089
(24 hrs., 7 days a week)

Product Information

Product name: SPOTLEAK® 1007
Synonyms: Not available
Molecular formula: Mixture
Chemical family: mercaptans
Product use: Odour agents

2. HAZARDS IDENTIFICATION

Emergency Overview

DANGER!
EXTREMELY FLAMMABLE LIQUID AND VAPOR.
VAPOR MAY CAUSE FLASH FIRE.
HARMFUL OR FATAL IF SWALLOWED.
CAN ENTER LUNGS AND CAUSE DAMAGE.
MAY CAUSE SKIN IRRITATION.
MAY CAUSE ALLERGIC SKIN REACTION.
OBJECTIONABLE ODOR MAY CAUSE NAUSEA, HEADACHE OR DIZZINESS.

Potential Health Effects

Primary routes of exposure:
Inhalation and skin contact.

Signs and symptoms of acute exposure:
Objectionable odor may cause nausea, headache or dizziness. May cause skin irritation. Prolonged or repeated skin contact may cause: Allergic skin reaction: redness, rash. Aspiration hazard if swallowed - can enter lungs and cause damage. Symptoms of aspiration may include increased breathing and heart rate, coughing and related signs of respiratory distress.

Skin:

No more than slightly toxic. (based on animal studies) Moderately irritating. May cause allergic skin reaction. (based on components)

Inhalation:
Practically nontoxic. (based on animal studies)

Eyes:
Slightly irritating. (based on animal studies)

Ingestion:
Practically nontoxic. (based on animal studies)

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical name	CAS-No.	Wt/Wt	WHMIS Controlled
2-Propanethiol, 2-methyl-	75-66-1	>= 60 - <= 100 %	Y
Ethane, (methylthio)-	624-89-5	>= 10 - < 30 %	Y

The substance(s) marked with a "Y" in the above WHMIS Controlled column are those identified as hazardous chemicals under the Controlled Products Regulation.

4. FIRST AID MEASURES

Inhalation:
If inhaled, remove victim to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

Skin:
In case of contact, immediately flush skin with soap and plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. Wash clothing before reuse. Thoroughly clean shoes before reuse.

Eyes:
In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention.

Ingestion:
If swallowed, DO NOT induce vomiting. Get medical attention. Never give anything by mouth to an unconscious person.

5. FIREFIGHTING MEASURES

Flash point: < 0 °F (< -18 °C) (Tag closed cup)

Auto-ignition temperature: 460 °F (238 °C)

Lower flammable limit (LFL): Not determined

Upper flammable limit (UFL): Not determined

Extinguishing media (suitable):
Carbon dioxide (CO2), Foam, Dry chemical

Extinguishing media (unsuitable):
High volume water jet

Protective equipment:
Fire fighters and others who may be exposed to products of combustion should wear full fire fighting turn out gear (full Bunker Gear) and self-contained breathing apparatus (pressure demand / NIOSH approved or equivalent).

Further firefighting advice:
Cool closed containers exposed to fire with water spray.
Do not use a solid water stream as it may scatter and spread fire.
Closed containers of this material may explode when subjected to heat from surrounding fire.
After a fire, wait until the material has cooled to room temperature before initiating clean-up activities.
Do not allow run-off from fire fighting to enter drains or water courses.
Fire fighting equipment should be thoroughly decontaminated after use.

Hazardous combustion products:

Vapors are heavier than air and may travel along the ground or be moved by ventilation and ignited by heat, pilot lights, and other flames and ignition sources at locations distant from material handling point.
Vapours may form explosive mixture with air.
When burned, the following hazardous products of combustion can occur:
Carbon oxides
sulfur oxides
hydrogen sulfide

Explosion Data:

Sensitivity to Mechanical Impact: No

Sensitivity to Static Discharge: Yes

6. ACCIDENTAL RELEASE MEASURES

In case of spill or leak:
Prevent further leakage or spillage if you can do so without risk. Evacuate area of all unnecessary personnel. Eliminate all ignition sources. Ventilate area only if odor control is not an issue. Cover spill area with closed-cell foam to reduce odors (use of Aqueous Film Forming Foam (AFFF) with polymeric layer is acceptable). If foam is unavailable, absorb spill with liquid-binding material (e.g. diatomaceous earth, saw dust universal binder) and deodorize residue on ground with 3-10% hydrogen peroxide. Wash with water and recover it. If spill is contained within a large containment area, add 5% bleach solution (sodium hypochlorite) in a 50 parts bleach solution to one part product dilution ratio. Swimming pool chemicals (hypochlorite compounds) work effectively in deodorizing product. If these are applied to product, the crystals must be accompanied by sufficient water of dilution so that the considerable heat of reaction will be absorbed. Enzyme or bacteria based deodorizers are also acceptable for use. Sweep or scoop up using non-sparking tools and place into suitable properly labeled containers for prompt disposal. Place waste materials into Department of Transportation (DOT)-approved drums for disposal. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Consult a regulatory specialist to

determine appropriate provincial or local reporting requirements, for assistance in waste characterization and/or hazardous waste disposal and other requirements listed in pertinent environmental permits.

7. HANDLING AND STORAGE

Handling

General information on handling:
Avoid breathing vapor or mist.
Avoid contact with eyes.
Avoid prolonged or repeated contact with skin.
Keep away from heat, sparks and flames.
No smoking.
Keep container closed.
Use only with adequate ventilation.
Wash thoroughly after handling.
Check that all equipment is properly grounded and installed to satisfy electrical classification requirements.
Container hazardous when empty.
Emptied container retains vapor and product residue.
Follow label warnings even after container is emptied.
Do not enter confined spaces unless adequately ventilated.
RESIDUAL VAPORS MAY EXPLODE ON IGNITION.
DO NOT CUT, DRILL, GRIND, OR WELD ON OR NEAR THIS CONTAINER.
Improper disposal or reuse of this container may be dangerous and/or illegal.

Storage

General information on storage conditions:
Keep in a dry, cool place. Keep away from direct sunlight. Keep container closed when not in use. Store in closed containers, in a secure area to prevent container damage and subsequent spillage. Store in well ventilated area away from heat and sources of ignition such as flame, sparks and static electricity. Ensure that all storage and handling equipment is properly grounded and installed to satisfy electrical classification requirements. Static electricity may accumulate when transferring material. All metal and groundable storage containers, including but not limited to drums, cylinders, Returnable Intermodal Bulk Containers (RIBCs) and Class C Flexible Intermodal Bulk Containers (FIBCs) must be bonded and grounded during filling and emptying operations.

Storage incompatibility – General:
Store separate from: Strong oxidizing agents

Acids (concentrated solutions)

Alkaline earth metals

Bases

Reducing agents

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Airborne Exposure Guidelines:

Engineering controls:

Investigate engineering techniques to reduce exposures below airborne exposure limits or to otherwise reduce exposures. Provide ventilation if necessary to minimize exposures or to control exposure levels to below airborne exposure limits (if applicable see above).If practical, use local mechanical exhaust ventilation at sources of air contamination such as open process equipment.

Monitor carbon monoxide and oxygen levels in tanks and enclosed spaces.Consult ACGIH ventilation manual or NFPA Standard 91 for design of exhaust systems.

Respiratory protection:
Avoid breathing vapor or mist. Where airborne exposure is likely or airborne exposure limits are exceeded (if applicable, see above), use NIOSH approved respiratory protection equipment appropriate to the material and/or its components. Full facepiece equipment is recommended and, if used, replaces need for face shield and/or chemical goggles. Consult respirator manufacturer to determine appropriate type equipment for a given application. Observe respirator use limitations specified by NIOSH or the manufacturer. For emergency and other conditions where there may be a potential for significant exposure or where exposure limit may be significantly exceeded, use an approved full face positive-pressure, self-contained breathing apparatus or positive-pressure airline with auxiliary self-contained air supply.

Skin protection:
Wear appropriate chemical resistant protective clothing and chemical resistant gloves to prevent skin contact. Consult glove manufacturer to determine appropriate type glove material for given application. Wear chemical goggles, a face shield, and chemical resistant clothing such as a rubber apron when splashing may occur. Rinse immediately if skin is contaminated. Remove contaminated clothing immediately and wash before reuse. Clean protective equipment before reuse. Provide a safety shower at any location where skin contact can occur. Wash thoroughly after handling.

Eye protection:
Where there is potential for eye contact, wear chemical goggles and have eye flushing equipment immediately available.

9. PHYSICAL AND CHEMICAL PROPERTIES

Color:	colourless
Physical state:	liquid
Odor:	strong, stinging
Odour Threshold:	0.1 ppb
pH:	not determined
Density:	not determined
Specific Gravity (Relative density):	0.815 68 °F(20 °C)
Vapor pressure:	294 mmHg (100 °F (38 °C))
Relative vapor density:	3 (Air = 1.0)
Vapor density:	not determined

Boiling point/boiling range:	63 - 70 °C
Freezing point:	< -51 °F (< -46 °C)
Melting point/range:	not determined
Evaporation rate:	No data available
Solubility in water:	68 °F (20 °C) insoluble
Solubility in other solvents: [qualitative and quantative]	Soluble in: Alcohols Ethyl ether
Refractive index:	1.427 68 °F (20 °C)
Viscosity, dynamic:	0.55 mPa.s 68 °F (20 °C)
Oil/water partition coefficient:	No data available
Thermal decomposition	No data available

10. STABILITY AND REACTIVITY

Stability:
This material is chemically stable under normal and anticipated storage, handling and processing conditions.

Hazardous reactions:
None known.

Materials to avoid:
• Reacts violently with :
Strong oxidizing agents
Acids (concentrated solutions)
Bases
Reducing agents
Alkaline earth metals

Conditions / hazards to avoid:
Keep away from heat and sources of ignition. To avoid thermal decomposition, do not overheat.

Hazardous decomposition products:

Thermal decomposition giving flammable and toxic products
Carbon oxides
sulfur oxides
hydrogen sulfide

11. TOXICOLOGICAL INFORMATION

Data on this material and/or its components are summarized below.

Data for SPOTLEAK® 1007

Acute toxicity

Oral:
Practically nontoxic. (rat) LD50 > 5,000 mg/kg.

Dermal:
No more than slightly toxic. (rat) LD50 > 2,000 mg/kg.

Inhalation:
Practically nontoxic. (rat) 1 h LC50 > 20 mg/l.

Skin Irritation:
No data available.

Eye Irritation:
Slightly irritating. (rabbit)

Sensitization:
No data available.

Skin Sensitization:
No data available.

Repeated dose toxicity
No data available.

Carcinogenicity
No data available.

Genotoxicity

Assessment in Vitro:
No data available.

Assessment in Vivo:
No data available.

Developmental toxicity
No data available.

Reproductive effects No data available.

Other information
Aspiration hazard

Data for 2-Propanethiol, 2-methyl- (75-66-1)

Acute toxicity

Oral:
Slightly toxic. (rat) LD50 = 4,729 mg/kg.

Dermal:
No deaths occurred. (rabbit) LD0 > 2,000 mg/kg.

Inhalation:
Practically nontoxic. (rat) 4 h LC50 = 82 - 98 mg/l. (vapor)

Skin Irritation:
Non-irritating. (rabbit) Irritation Index: 0/8. (4 h) (occluded exposure)

Eye Irritation:
Slightly irritating. (rabbit)

Sensitization:
No data available.

Skin Sensitization:
Skin sensitizer. Buehler method. (guinea pig) Skin allergy was observed.
Sensitising. LLNA: Local Lymph Node Assay. (mouse) Produced an allergic reaction.

Repeated dose toxicity
Subchronic inhalation administration to rat / affected organ(s): kidney / signs: inflammation, degeneration, increased organ weight / (not considered relevant to humans)
Repeated oral administration to rat / affected organ(s): kidney / signs: hyaline droplet nephropathy / (not considered relevant to humans)

Carcinogenicity
No data available.

Genotoxicity

Assessment in Vitro:
No genetic changes were observed in laboratory tests using: bacteria, animal cells
Assessment in Vivo:
No genetic changes were observed in laboratory tests using: mice

Developmental toxicity
Exposure during pregnancy. inhalation (rat and mouse) / No birth defects were observed.
Reproductive/Developmental Effects Screening Assay. oral (rat) / No birth defects were observed.

Reproductive effects
Reproductive/Developmental Effects Screening Assay. oral (rat) / No toxicity to reproduction.

Other information
(Due to the viscosity, this substance may present an aspiration hazard.)
(Symptoms of aspiration may include increased breathing and heart rate, coughing and related signs of respiratory distress.)

Data for Ethane, (methylthio)- (624-89-5)

Acute toxicity

Oral:
Practically nontoxic. (rat) LD50 > 5,000 mg/kg.

Dermal:
No more than slightly toxic. (rat) LD0 > 2,000 mg/kg.

Inhalation:
Practically nontoxic. (rat) 4 h LC0 > 21.7 mg/l. (vapor)

Skin Irritation:
Moderately irritating. (rabbit) Irritation Index: 3,4/8,0. (4 h)

Eye Irritation:
Moderately irritating. (rabbit) Irritation Index: 16/110. (24 h)

Sensitization:
No data available.

Skin Sensitization:
Not a sensitizer. Guinea pig maximization test. No skin allergy was observed

Repeated dose toxicity
No data available.

Carcinogenicity
No data available.

Genotoxicity

Assessment in Vitro:
No genetic changes were observed in laboratory tests using: bacteria, human cells

Assessment in Vivo:
No data available.

Developmental toxicity
No data available.

Reproductive effects
No data available.

Other information
(Due to the viscosity, this substance may present an aspiration hazard.)
(Symptoms of aspiration may include increased breathing and heart rate, coughing and related signs of respiratory distress.)

12. ECOLOGICAL INFORMATION

Chemical Fate and Pathway
Data on this material and/or its components are summarized below.

Data for 2-Propanethiol, 2-methyl- (75-66-1)

Biodegradation:
Not readily biodegradable. (63 d) biodegradation 6 %

Data for Ethane, (methylthio)- (624-89-5)

Biodegradation:
Not readily biodegradable. (28 d) biodegradation 41 %

Octanol Water Partition Coefficient:
log Pow = 1.54

Photodegradation:
air Half-life direct photolysis: estimated 1.9 d

Ecotoxicology
Data on this material and/or its components are summarized below.

Data for 2-Propanethiol, 2-methyl- (75-66-1)

Aquatic toxicity data:
Slightly toxic. Oncorhynchus mykiss (rainbow trout) 96 h LC50 = 34 mg/l

Aquatic invertebrates:
Moderately toxic. Daphnia magna (Water flea) 48 h EC50 = 6.7 mg/l

Algae:
Slightly toxic. Pseudokirchneriella subcapitata (green algae) 72 h EC50 = 24 mg/l

Data for Ethane, (methylthio)- (624-89-5)

Aquatic toxicity data:
No more than slightly toxic. Danio rerio (zebra fish) 96 h LC0 > 49.8 mg/l

Aquatic invertebrates:
Slightly toxic. Daphnia magna (Water flea) 48 h EC50 = 16 mg/l

Algae:
Practically nontoxic. Pseudokirchneriella subcapitata (green algae) 72 h ErC50 > 500 mg/l

Microorganisms:
Respiration inhibition / Activated sludge 3 h EC50 > 1,000 mg/l

Chronic toxicity to aquatic plants:
Pseudokirchneriella subcapitata (green algae) 72 d NOEC (growth rate) = 76 mg/l

13. DISPOSAL CONSIDERATIONS

Waste disposal:
Disposal via incineration is recommended. Dispose of in accordance with federal, provincial and local regulations. Consult a regulatory specialist to determine appropriate provincial or local reporting requirements, for assistance in waste characterization and/or hazardous waste disposal and other requirements listed in pertinent environmental permits. Note: Chemical additions to, processing of, or otherwise altering this material may make this waste management information incomplete, inaccurate, or otherwise inappropriate. Furthermore, provincial and local waste disposal requirements may be more restrictive or otherwise different from federal laws and regulations.

14. TRANSPORT INFORMATION

Canadian Transportation of Dangerous Good (TDG)

UN Number	:	3336
Proper shipping name	:	Mercaptan, liquid, flammable, n.o.s.
Technical name	:	(tert-Butylmercaptan, Methylethyl sulfide)
Class	:	3
Packaging group	:	II
Marine pollutant	:	yes

International Maritime Dangerous Goods Code (IMDG)

UN Number	:	3336
Proper shipping name	:	MERCAPTANS, LIQUID, FLAMMABLE, N.O.S.
Technical name	:	(t-BUTYLMERCAPTAN, METHYL ETHYL SULPHIDE)
Class	:	3
Packaging group	:	II
Marine pollutant	:	yes
Flash point	:	< 0 °F (< -18 °C) Tag closed cup

15. REGULATORY INFORMATION

Chemical Inventory Status

EU. EINECS	EINECS	Conforms to
United States TSCA Inventory	TSCA	The components of this product are all on the TSCA Inventory.
Canadian Domestic Substances List (DSL)	DSL	All components of this product are on the Canadian DSL
China. Inventory of Existing Chemical Substances in China (IECSC)	IECSC (CN)	Conforms to
Japan. ENCS - Existing and New Chemical Substances Inventory	ENCS (JP)	Conforms to
Japan. ISHL - Inventory of Chemical Substances	ISHL (JP)	Conforms to
Korea. Korean Existing Chemicals Inventory (KECI)	KECI (KR)	Conforms to
Philippines Inventory of Chemicals and Chemical Substances (PICCS)	PICCS (PH)	Conforms to
Australia Inventory of Chemical Substances (AICS)	AICS	Conforms to
New Zealand. Inventory of Chemical Substances	NZIOC	Conforms to

Canada - Federal Regulations

Workplace Hazardous Materials Information System (WHMIS)

B2: Flammable liquid
D2B: Toxic material causing other toxic effects

Ingredient Disclosure List (IDL)

WHMIS Ingredient Disclosure List IDL: No component is listed on the WHMIS ingredients disclosure list.

WHMIS Regulated Carcinogens (IARC, ACGIH Listed):
IARC:
No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

ACGIH:
No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

National Pollution Release Inventory (NPRI)

Canadian National Pollutant Release Inventory (NPRI): No component is listed on NPRI.

16. OTHER INFORMATION

Miscellaneous:

Other information:	Refer to National Fire Protection Association (NFPA) Codes 30, 70, 77, and 497 for safe handling.

Latest Revision(s):

Reference number:	000000035652
Date of Revision:	06/15/2016
Date Printed:	06/15/2016
PREPARED BY:	TECHNICAL DEPARTMENT
PHONE NUMBER OF PREPARER:	(800) 567-5726
PREPARATION DATE:	06/15/2016

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