

## Safety Data Sheet (CANADA)

### 1. Identification

**Product Identifier:** Sulphur, molten

**Other Means of Identification:** Sulphur, Molten Sulphur, Liquid Sulfur, Liquid Sulphur

**Product use:** As raw material in the manufacture of sulphuric acid, fertilizers, in rubber vulcanization & other chemical processes

**Restrictions on use:** Do not use for non-industrial purpose

**Manufacturer:** Keyera and Affiliates





**Address:** Suite 600, Sunlife Plaza West  
144 – 4<sup>th</sup> Avenue SW, Calgary, AB, T2P 3N4

**SDS Information:** 1-780-449-7910

**Emergency Contact (24 hours):** 1-613-996-6666 (CANUTEC, Canada)  
1-800-424-9300 (CHEMTREC, U.S.)

### 2. Hazards Identification

#### GHS Hazards

Pictogram	Classification	Hazard Statements
	Flammable Solids – Category 2 (if molten sulphur solidifies)	Flammable solid,
	Acute Toxicity – Inhalation – Category 2	Fatal if inhaled,
	Eye Damage/Irritation – Category 2A  Skin Corrosion/Irritation – Category 2	Causes serious eye irritation,  Causes skin irritation,
	Specific Target Organ Toxicity – Single Exposure – Category 1  Specific Target Organ Toxicity – Repeated Exposure – Category 1 & Category 2  Sensitization – Respiratory – Category 1  Toxic to Reproduction – Category 2	Causes damage to cardiovascular system, central nervous system, respiratory system.  Causes damage to blood system, respiratory system through prolonged or repeated exposure.  May cause damage to respiratory system and skin through prolonged or repeated exposure. May cause allergy or asthma symptoms or breathing difficulties if inhaled.  Suspected of damaging fertility or the unborn child.

#### Other Hazards

- Contact with the hot molten sulphur will cause severe thermal skin burns and eye damage.

**Signal Word:** Danger

**Precautionary Statements:**

**Prevention**

- Keep away from heat/sparks/open flames/hot surfaces – No smoking.
- Ground/Bond container and receiving equipment.
- Use explosion-proof ventilation equipment.
  
- Do not breathe fume/mist/spray.
- Wash skin thoroughly after handling.
- Do not eat, drink or smoke when using this product.
  
- Use only outdoors or in a well-ventilated area.
- In case of inadequate ventilation, wear respiratory protection.
- Wear respiratory protection/protective gloves/ protective clothing/ eye protection/ face protection.
  
- Obtain special instructions before use.
- Do not handle until all safety precautions have been read and understood.

**Response**

- In case of fire: use dry chemical, CO<sub>2</sub>, water spray or fire-fighting foam to extinguish.
  
- If inhaled: If breathing is difficult, remove person to fresh air and keep comfortable for breathing.
- If experiencing respiratory symptoms: Call a doctor/physician.
  
- If exposed: Call a doctor/physician.
- Get medical attention if you feel unwell.
  
- If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do so. Continue rinsing.
- If eye irritation persists: Get medical advice/attention.
  
- If on skin: Wash with plenty of water/shower.
- If skin irritation occurs: get medical advice/attention.
- Take off contaminated clothing and wash before reuse.

**Storage**

- Store locked up.
- Store in a well-ventilated place. Keep container tightly closed.

**Disposal**

- Dispose of contents/container in accordance with applicable local, provincial/state, and federal regulations.

### 3. Composition/Information on Ingredients

**Chemical Name:** Sulphur, molten  
**Common Name/Synonyms:** Sulphur, Molten Sulphur, Liquid Sulfur, Liquid Sulphur

Ingredient Name	wt %	CAS No.
Sulphur molten	99.9 – 100.0%	7704-34-9
Hydrogen sulphide	0 – 0.1%	7783-06-4
Sulphur dioxide	0 – 0.1%	7446-09-5

### 4. First Aid Measures

**Immediate Medical Attention and Special Treatment:**  
Treat symptomatically and supportively. Refer also to Table below.

First Aid:	
Inhalation:	If breathing is difficult, remove person to fresh air and keep comfortable for breathing. If experiencing respiratory symptoms: Call a doctor/physician.
Skin:	Do not remove solidified molten sulphur or clothing which are stuck to the skin, as underlying tissues can be torn away during such attempts.  Take off contaminated clothing. Wash with plenty of water/shower. If skin irritation occurs: get medical advice/ attention.  If burnt: Cover skin with clean, dry dressings and do not apply burn ointments! Seek medical attention immediately.
Eyes:	Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do so. Continue rinsing. If eye irritation persists: get medical advice/attention.
Ingestion:	Highly unlikely, but if ingested, rinse mouth with cold water. DO NOT induce vomiting unless directed by medical professional. DO NOT attempt to give anything by mouth to an unconscious person. Get medical attention immediately.

**Most Important Effects and Symptoms, Acute or Delayed:**  
Contact with the hot molten sulphur will cause severe thermal skin burns and eye damage.

Exposure Route	Health Effects	Symptoms of Exposure
Skin	Burn and tissue damage.	From redness/pain to blisters. Severe burn: no pain and dry skin if nerve endings and sweat glands are damaged.
Eyes	Burn and tissue damage.	Eye damage to blindness.

### 5. Fire Fighting Measures

<p><b>Flammability:</b> Both the sulphur liquid (molten) and vapor can be ignited easily by flame, sparks, or static electricity discharge.</p>	<p><b>Hazardous Combustion Products:</b> May include carbon monoxide (CO), carbon dioxide (CO<sub>2</sub>), and sulphur dioxide (SO<sub>2</sub>).</p>
<p><b>Sensitive to impact:</b> No.</p>	<p><b>Sensitive to static discharge:</b> No.</p>
<p><b>Extinguishing Media:</b> Small Fire: Dry chemical, CO<sub>2</sub>, sand, earth, water spray or regular foam. Large Fire: Water spray, fog or regular foam.</p>	
<p><b>Unsuitable Extinguishing Media:</b></p> <ul style="list-style-type: none"> <li>• Water or foam may cause frothing of molten sulphur, causing boil over.</li> </ul>	
<p><b>Special Protective Equipment for Firefighters:</b></p> <ul style="list-style-type: none"> <li>• Wear full protective clothing and NIOSH-approved SCBA with full face-piece.</li> </ul>	
<p><b>Precautions for Firefighters:</b></p> <ul style="list-style-type: none"> <li>• Contact with the hot molten sulphur will cause severe thermal skin burns and eye damage.</li> <li>• The molten sulphur can release ~100-300 ppm Hydrogen Sulfide H<sub>2</sub>S and Sulphur Dioxide SO<sub>2</sub> into the atmosphere.</li> <li>• This highly flammable liquid must be kept from sparks, open flame, hot surfaces, and all sources of ignition and heat.</li> <li>• Move container from fire area if you can do it without risk.</li> <li>• Apply cooling water to sides of containers exposed to flames until well after fire is out.</li> <li>• Stay away from ends of tanks.</li> <li>• For massive fire, use unmanned hose holders or monitor nozzles; if this is impossible, withdraw from area and let fire burn.</li> <li>• Withdraw immediately in case of rising sound from venting safety device or any discoloration of tank due to fire.</li> <li>• Cool fire-exposed containers with flooding quantities of water applied from as far a distance as possible.</li> <li>• Consider evacuation of downwind area if material is leaking.</li> <li>• If tank, rail car or tank truck is involved in a fire, isolate for 800 meters (1/2 mile) in all directions; also consider initial evacuation for 800 meters (1/2 mile) in all directions.</li> <li>• See Guide 133, Emergency Response Guidebook (Transp. Can/US Dept. of Transp.).</li> </ul>	
<p><b>Unusual Fire and Explosion Hazards:</b></p> <ul style="list-style-type: none"> <li>• The highly flammable vapors are heavier than air and may accumulate in low areas and /or spread along ground to distant ignition sources and flash back.</li> <li>• As molten sulphur may contain H<sub>2</sub>S, the flammability of the headspace vapors containing H<sub>2</sub>S will differ from that of pure sulphur.</li> <li>• In enclosed spaces above the molten sulphur, the concentration of H<sub>2</sub>S may accumulate and exceed the LEL (4.3% by volume in air).</li> <li>• Can form explosive mixtures with oxidizers (e.g. acid, chlorine).</li> <li>• Sulphur burns with a blue flame which may be difficult to see in daylight.</li> <li>• Water or foam may cause frothing of molten sulphur, with further application leading to boil over.</li> <li>• Steam explosions may occur when mixing water with molten sulphur.</li> </ul>	

## 6. Accidental Release Measures

### Protective Equipment:

Gloves:	Recommended: rubber or neoprene gloves, and heat-resistant outerwear as well as fire retardant clothing and insulated protective gloves when handling molten sulphur. Not recommended: PVC, latex.
Clothing:	Flame-retardant e.g. Nomex, Proban.
Respirator:	A SABA (Supplied Air Breathing Apparatus) or SCBA (Self-Contained Breathing Apparatus) is required if there is a potential for uncontrolled release, exposure levels are unknown, or any other circumstance exists where an air-purifying respirator may not provide adequate protection. Where appropriate, a NIOSH/MSHA approved air-purifying respirator with dust cartridges and acid gas cartridges can be used. When assessing the proper type of respiratory protection, also consider the occupational exposure limits applicable to individual ingredients.
Eye:	Chemical goggles <u>and</u> face shield unless full-face respiratory protection is being worn.

### Precautions:

- Sulphur itself is relatively non-toxic to humans, causing mild local irritation to the eyes, nose, throat and upper airways. However, hot molten sulphur may cause severe thermal skin burns and eye damage.
- The molten sulphur can release ~100-300 ppm Hydrogen Sulfide H<sub>2</sub>S and Sulphur Dioxide SO<sub>2</sub> into the atmosphere.
- Beware that water or foam may cause frothing of molten sulphur, with further application leading to boil over, and steam explosions may occur when mixing water with molten sulphur.

### Emergency Procedures:

- Shut off leak/release source, if it can be done safely.
- Remove all sources of ignition.
- Isolate hazard area.
- Evacuate area of all unnecessary personnel.  
 Small spill: consider downwind evacuation of at least 10-25 meters (30-80 feet).  
 Large spill: consider downwind evacuation of at least 100 meters (330 feet).  
 If tank, rail car or tank truck is involved in a fire, evacuate in all directions of at least 800 meters (1/2 mile).
- Keep unnecessary and unprotected personnel from entering.
- Emergency personnel must wear appropriate personal protective equipment.
- Ventilate area of leak or spill.

### Containment and Clean-up:

- Use non-sparking tools and equipment.
- Use booms/pillows to prevent runoff into storm sewers and ditches that lead to waterways.
- If it can be done safely contain and recover the liquid/molten sulphur, which will turn into solid when cooled, into appropriate container (e.g. for chemical waste: Collect spillage or absorb with an inert material (e.g., vermiculite, dry sand, earth), and place in metal container which can be grounded.
- Do not use combustible materials, such as sawdust, as absorbent.
- Refer to Guide 133 of the Emergency Response Guidebook (Transport Canada/US Dept. of Transportation).

## 7. Handling and Storage

### Handling Precautions :

- Use only in a well ventilated area.
- Keep away from heat/sparks/open flames/hot surfaces – No smoking.
- Avoid contact with eyes, skin, and clothing. Contact with the hot molten sulphur will cause severe thermal skin burns and eye damage.
- Avoid ingestion and inhalation.
- Wear protective gloves/clothing and eye/face protection.
- Use only non-sparking tools and explosion-proof ventilation equipment.
- Take precautionary measures against static discharge.
- Ground/bond containers and equipment when transferring material.

### Storage Precautions:

#### Locations

- Store in a cool, dry, well-ventilated location, away from any area of fire-hazard.
- Outside or detached storage is preferred.
- Storage and use areas should be No Smoking areas.
- Ventilation system must be explosion-proof.

#### Containers

- Containers should be grounded.
- Containers of this material may be hazardous when empty since they retain product residues (vapors, liquid); observe all warnings and precautions listed for the product.
- Do not attempt to clean empty containers since residue is difficult to remove.
- Do not pressurize, cut, weld, braze, solder, drill, grind or expose such containers to heat, sparks, flame, static electricity or other sources of ignition: they may explode and cause injury or death.

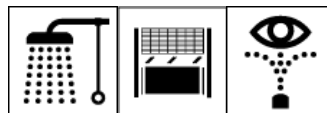
#### Other precautions

- Separate from incompatibles like oxidizers e.g. bromates, chlorates, chromates, hypochlorites, perchlorates, peroxides, nitrates, nitrites.

**8. Exposure Controls / Personal Protection**

**EXPOSURE LIMITS**

	Authority	15 MINS STEL or Ceiling	8-HOURS
Sulphur (CAS 7704-34-9)	Alberta	-	10 mg/m <sup>3</sup>
Hydrogen sulphide (CAS 7783-06-4)	Alberta, Ontario	15 ppm (21 mg/m <sup>3</sup> ) Ceiling	10 ppm (14 mg/m <sup>3</sup> )
	BC	10 ppm (14 mg/m <sup>3</sup> ) Ceiling	-
Sulphur dioxide (CAS 7446-09-5)	Alberta, Ontario	5 ppm (13 mg/m <sup>3</sup> )	2 ppm (5.2 mg/m <sup>3</sup> )
	BC	10 ppm (26 mg/m <sup>3</sup> )	5 ppm (13 mg/m <sup>3</sup> )



**ENGINEERING CONTROLS**

- Engineering control methods to reduce hazardous exposures are preferred. Methods include mechanical ventilation, process or personal enclosure, control or process conditions, and process modification.
- Ventilate area (mechanical general and/or local exhaust ventilation) where product is used, stored and/or handled to maintain airborne concentration of potential H<sub>2</sub>S below the LEL and OEL, especially in confined spaces.
- Ventilation system must be explosion proof, grounded and separate from other exhaust ventilation systems.
- Supply sufficient replacement air to make up for air removed by exhaust systems.

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**PERSONAL PROTECTIVE EQUIPMENT**

- Gloves:** Recommended: rubber or neoprene gloves, and heat-resistant outerwear as well as fire retardant clothing and insulated protective gloves when handling molten sulphur. Not recommended: PVC, latex.
- Clothing:** Flame-retardant e.g. Nomex, Proban.
- Respirator:** A SABA (Supplied Air Breathing Apparatus) or SCBA (Self-Contained Breathing Apparatus) is required if there is a potential for uncontrolled release, exposure levels are unknown, or any other circumstance exists where an air-purifying respirator may not provide adequate protection. Where appropriate, a NIOSH/MSHA approved air-purifying respirator with dust cartridges and acid gas cartridges can be used. When assessing the proper type of respiratory protection, also consider the occupational exposure limits applicable to individual ingredients.
- Eye:** Chemical goggles and face shield unless full-face respiratory protection is being worn.

### 9. Physical and Chemical Properties

<b>Chemical Formula:</b> S	<b>Molecular Weight:</b> 32.0 g/mole	<b>Chemical Family:</b> Non-metallic element
<b>Appearance:</b> Opaque, amber "molten solid" (liquid)	<b>Odor:</b> Odorless; rotten egg odor when hydrogen sulfide is present	<b>Odor Threshold:</b> ~0.01-0.005 ppm (for H <sub>2</sub> S) <b>NOT</b> Sulphur
<b>pH:</b> N/AP	<b>Freezing/Melting Point:</b> 113 – 120°C (235.4 – 248°F)	<b>Boiling Point:</b> 445°C (833°F)
<b>Flashpoint and Method:</b> 207°C (405°F) Cleveland Open Cup	<b>Flammability:</b> Yes	<b>Evaporation Rate:</b> Not available
<b>Upper-Lower Explosive Limit:</b> Not Available	<b>Vapor Pressure:</b> 1 mmHg @ 184°C (363°F)	<b>Vapor Density:</b> >38.9 (air = 1)
<b>Specific Gravity:</b> ~1.8 @20°C/4°C	<b>Percent Soluble (@25°C):</b> Insoluble in water	Slightly soluble in alcohol, ether, chloroform, toluene and benzene. Very soluble in carbon disulfide
<b>Partition Coefficient n-octanol/water:</b> Not Available	<b>Auto-Ignition Temperature:</b> 232°C (449.6°F)	<b>Decomposition Temp.:</b> Not available.
<b>Viscosity:</b> The viscosity of molten sulphur changes due to the various degree of polymerization. Just above the melting pt. of 120°C its viscosity is ~6x of the viscosity of water. At ~185°C it becomes so viscous that it cannot be poured. The viscosity decreases again at higher temperature, and decreases to ~10 times that of water at the boiling point of ~445°C.		

### 10. Stability and Reactivity

<b>Reactivity:</b> Avoid incompatible materials: may react violently with oxidizers.
<b>Chemical Stability:</b> Stable under normal temperatures and pressures.
<b>Possibility of Hazardous Reactions:</b> Polymerization has not been reported to occur under normal temperature and pressure conditions.
<b>Conditions to Avoid:</b> Keep away from heat/sparks/open flames/hot surfaces and incompatible materials.
<b>Incompatible Materials:</b> <ul style="list-style-type: none"> <li>• Reacts violently with oxidizing agents such as perchlorates, peroxides, permanganates, nitrates and halogens (chlorine, bromine, fluorine, iodine).</li> <li>• Reacts with hydrocarbons to form carbon disulfides and hydrogen sulfides.</li> <li>• Can react with metals such as sodium, calcium, tin, nickel or zinc under certain conditions.</li> </ul>
<b>Hazardous Decomposition Products:</b> No decomposition if stored and applied as directed. Combustion products may include sulphur dioxide SO <sub>2</sub> .



**11. Toxicological Information**

Exposure Route	Acute Health Effects	Symptoms of Exposure
<b>Inhalation:</b>	<u>Low concentration H<sub>2</sub>S (&lt;10 ppm):</u> May cause slight irritation of the nose, throat and lungs.	Cough, running nose, difficulty in breathing.
	<u>High concentration H<sub>2</sub>S (&gt;10 ppm):</u> Effects on the Central Nervous system (CNS)	Headache, dizziness, nausea, vomiting. Respiratory failure and possible death at > 100ppm H <sub>2</sub> S exposure
<b>Skin:</b>	Irritation (from fumes)	Redness and pain
	Thermal burn (from direct contact)	From redness/pain to blisters. Severe burn: no pain and dry skin if nerve endings and sweat glands are damaged
<b>Eye:</b>	Irritation (from fumes)	Redness and pain
	Thermal burn (from direct contact)	Severe eye damage, blindness
<b>Ingestion:</b>	No a likely exposure route	

<p><b>Chronic Exposure:</b> Long-term exposure to H<sub>2</sub>S may cause skin sensitization, so that severe allergic reaction may occur even when exposed to very low levels. Long term exposure to SO<sub>2</sub> may cause respiratory sensitization.</p>			
<p><b>Ingestion and Inhalation:</b> Repeated or prolonged exposure to fumes may cause irritation to the mucous membranes. Bronchi-pulmonary disease may occur which, after several years, may be complicated by emphysema and bronchiectasis. Early symptoms in sulphur miners often include upper respiratory tract catarrh (inflammation of the mucous membrane), with cough and expectoration which is mucoid and may even contain granules of sulphur. Asthma is a frequent complication.</p>			
<p><b>Sensitization:</b> Sulphur dioxide SO<sub>2</sub> in the molten sulphur may cause allergy or asthma symptoms or breathing difficulties if inhaled.</p>	<p><b>Reproductive Toxicology:</b> Sulphur dioxide SO<sub>2</sub> in the molten sulphur is suspected of damaging fertility or the unborn child.</p>	<p><b>Teratogenicity:</b> No</p>	<p><b>Mutagenicity:</b> No</p>
<p><b>Carcinogenicity:</b> Not listed by ACGIH, IARC, NIOSH, NTP, or OSHA.</p>	<p><b>Irritancy:</b> Irritant to eyes, nose, throat, gastrointestinal tract &amp; skin.</p>	<p><b>Target Organs:</b></p> <ul style="list-style-type: none"> <li>• Central Nervous System</li> <li>• Cardiovascular System</li> <li>• Respiratory System</li> <li>• Blood System.</li> </ul>	

**Lethality Tests:**

Chemical Name	CAS No.	LD50	LC50
Sulphur	7704-34-9	Rabbit, dermal >2000 mg/kg Rat, oral >3000 mg/kg	Rat, inhalation >9.23 mg/L, 4 hrs.
Hydrogen sulphide	7783-06-4		Rat, inhalation 0.99 mg/L, 1 hr.
Sulphur dioxide	7446-09-5		Rat, inhalation 2500 ppm, 1 hr.

## 12. Ecological Information

<b>Persistence &amp; Degradability:</b> No data available.	<b>Bioaccumulative Potential:</b> No.
<b>Mobility:</b> No data available.	<b>Other Adverse Effects:</b> No data available.

As sulphur is insoluble in water at 20°C, there is minimal immediate risk from spills. However, sulphur can oxidize under certain conditions to form acidic runoffs. Spilled sulphur should therefore be contained/recovered, and kept away from drainage and waterways.

**Eco Toxicity Tests**

Chemical Name	CAS No.	Species	Test Method	LC50/ EC50/
Sulphur	7704-34-9	Brachydanio rerio (Zebra Dario fish)	Static test; 96 hrs.	LC50 = 866 mg/L
		Lepomis macrochirus (Bluegill fish)	Static test; 96 hrs.	LC50 < 14 mg/L
		Oncorhynchus mykiss (Rainbow Trout)	Static test; 96 hrs.	LC50 > 180 mg/L
Hydrogen sulphide	7783-06-4	Lepomis macrochirus (Bluegill fish)	Flow-through; 96 hrs.	LC50 = 0.0448 mg/L
		Pimephales promelas (Fathead minnow)	Flow-through; 96 hrs.	LC50 = 0.016 mg/L

**13. Disposal Considerations**

**Waste Disposal:**

- Dispose of waste material at an approved (hazardous) waste treatment/disposal facility in accordance with applicable local, provincial, and federal regulations.
- Do not dispose of waste with normal garbage, or to sewer systems.

**14. Transport Information**

**TDG (CANADA) CLASSIFICATION**

**PROPER SHIPPING NAME:** Sulphur, Molten

**CLASS:** 4.1

**UN NUMBER:** UN2448

**PACKING GROUP:** III

**LABEL/PLACARD:**



The following TDG Special Provision s.p.32 applies to the shipping of molten sulphur:

These Regulations, **except Part 3 (Documentation)**, do not apply to these dangerous goods if they are transported by road vehicle or railway vehicle in a large means of containment and

a. the large means of containment is in standard with CAN/CSA-B621 for transport by road vehicle or with CAN/CGSB-43.147 for transport by railway vehicle; and

*NOTE: The container may be a non-specification container that meets the general requirements of Clause 4 of B621.*

b. the road or railway vehicle is marked on each side, in letters and numerals that are at least 6 mm wide and 100 mm high, with

(i) the letters and numerals UN2448, or

(ii) the numerals 2448 and the words MOLTEN SULPHUR, MOLTEN SULFUR or SOUFRE FONDU.

If you do not want to use the exemption above, you must fully comply with the TDG Regulations.

**IATA**

- Not permitted for transport (IATA Passenger or Cargo)

**15. Regulatory Information**

**CANADA**

<b>Regulatory List</b>	<b>Chemical</b>
DSL Domestic Substance List	Sulphur (CAS 7704-34-9) is on the DSL
E2 Environmental Emergencies	Sulphur (CAS 7704-34-9) is <u>not</u> on the E2 Substance list
NPRI National Pollutant Release Inventory	Sulphur (CAS 7704-34-9) is <u>not</u> on the NPRI list

**16. Other Information**

**NFPA Hazard Rating:**  
Health 4, Flammability 1, Instability 0



Prepared for: Keyera Health and Safety  
Issue Date/ Revision No.: August 31, 2015/ Revision #3

<b>Revisions:</b>	<b>Dates:</b>	<b>Main Changes</b>
• Original	January 3, 2011	By Deerfoot Consultant
• 1 <sup>st</sup> revision	October 31, 2013	format and general content changes
• 2 <sup>nd</sup> revision	June 30, 2015	GHS/ WHMIS 2015 format
• 3 <sup>rd</sup> revision	August 31, 2015	Change emergency contact number

**Glossary**

- ACGIH** – American Conference of Governmental Industrial Hygiene
- DOT** – US Department of Transportation
- DSL** – Domestic Substance List (Canada)
- E2** – Environmental Emergencies (Canada)
- GHS** – Globally Harmonized System
- IARC** – International Agency for Research on Cancer
- IDLH** – Immediately Dangerous to Life and Health
- NIOSH** – National Institute for Occupational Safety & Health
- NPRI** – National Pollutant Release Inventory (Canada)
- NTP** – National Toxicology Program
- OSHA** – Occupational Safety & Health Administration of the US Dept of Labour
- PEL** – Permissible Exposure Limit
- SARA** – Superfund Amendments and Reauthorization Act of 1986
- STEL** – Short Term Exposure Limit
- TRI** – US Toxic Release Inventory
- TSCA** – Toxic Substance Control Act
- TWA** – Time Weighed Average

**Disclaimer of Expressed and Implied Warranties**

The information presented in the Safety Data Sheet is based on data believed to be accurate as of the date this Safety Data Sheet was prepared. However, neither Keyera nor its affiliates assumes any liability whatsoever for the accuracy or completeness of the information contained herein. No responsibility is assumed for any damage or injury resulting from abnormal use or from any failure to adhere to recommended practices. The information provided above, and the product, are furnished on the condition that the person receiving them shall make their own determination as to the suitability of the product for their particular purpose and on the condition that they assume the risk of their use.

**~ End of Safety Data Sheet ~**