

**HALL CHEM MFG. INC.**1270 rue Nobel  
Boucherville Qc J4B 5H1

Tel. : (450) 645-0296

Fax : (450) 645-0444

**MATERIAL SAFETY DATA SHEET****EMERGENCY : CANUTEC (613) 996-6666****MSDS : 301-2****PRODUCT IDENTIFICATION AND USE**

NAME OF PRODUCT : Solar II

USE OF PRODUCT : No toxic antifreeze

**TRANSPORTATION OF DANGEROUS GOODS**

SHIPPING NAME :

WHMIS CLASSIFICATION: NOT REGULATED

P.N.I. :

PRIMARY CLASS : No toxic

PACKING GROUP :

SUBSIDIARY CLASS :

**COMPONENTS**

COMPOSITION	% V/V	CASE #	LD <sub>50</sub> mg/kg Oral/rat	LC <sub>50</sub>	TLV ppm 8h
Propylene glycol	>93	57-55-6	20 000-34 000		
Corrosion inhibitors					

**PHYSICAL CHARACTERISTICS**

<b>PHYSICAL STATE :</b> Liquid	<b>APPEARANCE :</b> Pink	<b>ODOR :</b> Typical	<b>ODORTRESHOLD :</b> Not available
<b>VAPOR TENSION :</b> 0,08 mmHg ( 20°C)	<b>VAPOR DENSITY :</b> 2,62	<b>EVAPORATING RATE :</b> Not available	
<b>BOILING RANGE :</b> 147°C (296,5°F)	<b>FREEZING POINT :</b> -32°C 50/50	<b>pH :</b> 9.5 to 10,8	
<b>DENSITY (g/mL) :</b> 1,038 at 20°C (68°F)	<b>DISTRIBUTION FACTOR WATER/OIL :</b> Not available	<b>SOLUBILITY IN WATER (25°C) :</b> 100%	

**REACTIVITY DATA****CHEMICAL STABILITY :** Stable under normal storage conditions.**INCOMPATIBILITY WITH OTHER PRODUCTS :** Avoid oxidizing material.**REACTIVITY CONDITIONS :** No hazardous polymerization.

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## EXPLOSION AND FIRE RISKS

### FLAMMABILITY :

**EXTINGUISHING METHODS :** Water fog, alcohol foam, carbon dioxide, dry chemical. Do not use a continuous stream of water because this will be propagate fire.

**FLASH POINT :** 103°C (218°F)

**AUTO-IGNITION TEMPS. :** Not available

**FLAMMABILITY (% per volume)**

**SUPERIOR LIMIT :** 12,5

**LOWER LIMIT :** 2,6

**HAZARDOUS COMBUSTION PRODUCT :** When available oxygen is limited, as in a fire or when heated to very high temperatures by hot wire or plate, propionaldehyde, carbon monoxide, hazardous compounds such as aldehydes, toxic gas and not identified toxic or irritating compounds or the both might be generated.

**EXPLOSIBILITY DATA :** Not available

## TOXICOLOGICAL PROPERTIES

ABSORPTION WAYS			CONTACT						
SKIN	√	INHALATION	√	INGESTION	√	WITH SKIN	√	EYES	√

**EFFECTS OF EXPOSURE TO PRODUCT :** Product can irritate mucus glands. High doses can provoke headaches, drowsiness, nausea, dizziness and fainting. Inhalation may aggravate cases of emphysema and bronchitis. Repeated contact with skin provokes irritations, dryness of the skin and cracking of the skin.

## PREVENTIVE MEASURES

**PROTECTIVE EQUIPMENT :** Gloves, security glasses and protective apron.

**GLOVES :** Impervious

**RESPIRATORY SYSTEM :** Atmospheric levels should be maintained below the exposure guideline. When respiratory protection is required for certain operations, use an approved air-purifying respirator. In misty atmospheres, use an approved mist respirator.

**OCULAR INSTRUMENT :** Chemical splash glasses and face shield. For misty operations, wear chemical goggles.

**CLOTHING :** Impervious apron

**TECHNICAL CONTROL :** At elevated temperatures, special ventilation may be required even if the flash point has not been exceeded. Flammable mists or aerosols can be generated below the flash point of high boiling liquids. Provide general and/or local exhaust ventilation to control airborne levels below the exposure guidelines.

**PROCEDURE IN CASE OF LEAKS/SPILLS :** Combustible liquid. Spill may contaminate water supplies or pollute public waters. Evacuate and limit access to area. Supply cleanup crew with proper protective equipment. Stop release and prevent flow to sewers or public waters. Notify fire and environmental authorities. Restrict water use for cleanup. This material can create a dangerous slipping hazard on any hard surface. Spread a granular cover (such as sand) or provide open grating on walkways. Impound and recover large liquid spill. Soak up small spills with



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inert solids and collect in suitable disposal containers. This material is water soluble and may float or sink. Diluted material may biodegrade. Contain and minimize dispersion; collect and contain in suitable disposal containers.

Disperse remaining residue to reduce aquatic harm. Report as per regulatory requirements.

**WASTE DISPOSAL :** Contaminated product, soil, water is potentially combustible. Solids may be landfilled at permitted sites in compliance with federal, provincial, local solid waste regulations. Burn concentrated liquid waste. Avoid flameouts and assure emissions comply with regulations. Dilute aqueous wastes may be biodegradable. Avoid overloading and poisoning plant biomass. Effluent must comply with applicable regulations.

**STORAGE AND HANDLING :** This product will absorb water if exposed to air (hygroscopic). Store in tightly closed containers away from heat, moisture or strong oxidizing agents. Use dry nitrogen to low dew point air for tank padding. Do not heat higher than 10°C below flash point unless in a closed system away from air. Do not handle near heat, sparks or open flame. Handle empty containers with care as residue can burn if heated. Store in containers lined with stainless steel, aluminum, Plasite 3066 or stainless steel 316

### FIRST AID

- SKIN :** Wash off in flowing water or shower. Wash clothing before re-use. See a doctor if irritation develops or persists.
- EYES :** Remove contact lenses. Wash with running water for 29 to 30 minutes; lift eyelids often. See a doctor if redness, pain or blinking develops or persists.
- INHALATION :** Remove to fresh air if effects occur. Give oxygen of artificial respiration as needed. Obtain emergency medical attention. Prompt action is essential.
- INGESTION :** If a large quantity is swallowed, induce vomiting. Do not give by mouth to an unconscious person. Seek medical attention.
- NOTES TO PHYSICIAN :** No specific antidote. Supporting care, treatment based on judgement of the physician on response to reactions of the patient.

### INFORMATION ON THE M.S.D.S. PREPARATION

**PREPARED BY :**  
Hall Chem Mfg. Inc.

**TELEPHONE :** (450) 645-0296

**DATE:** January 2015

**NOTE :**

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