ARROW CHEMICAL GROUP CORP.

Material Safety Data Sheet

PROPYLENE GLYCOL

1. Product Identification

Synonyms: 1,2-propanediol; 1,2-dihdroxypropane; methyl glycol; methylethylene glycol

CAS No.: 57-55-6

Molecular Weight: 76.09

Chemical Formula: CH3CHOHCH2OH

Company Name： ARROW CHEMICAL GROUP CORP.

Address: 5 F,Inter Royal Mansion, No.15, Donghai West Road, Qingdao, China

Postcode: 26600

2. Composition/Information on Ingredients

In	CAS No	Percent	Hazardous
Propylene Glycol	57-55-6	99 - 100%	Yes

3. Hazards Identification

Emergency Overview

CAUTION! MAY CAUSE IRRITATION TO SKIN AND EYES.

SAF-T-DATA(tm) Ratings (Provided here for your convenience)

Health Rating: 2 - Moderate (Life)

Flammability Rating: 1 - Slight

Reactivity Rating: 1 - Slight

Contact Rating: 1 - Slight

Lab Protective Equip: GOGGLES; LAB COAT; VENT HOOD; PROPER GLOVES

Storage Color Code: Green (General Storage)

Potential Health Effects

Inhalation:

No adverse health effects via inhalation.

Ingestion:

Relatively non-toxic. Ingestion of sizable amount (over 100ml) may cause some gastrointestinal upset and temporary central nervous system depression. Effects appear more severe in individuals with kidney problems.

Skin Contact: Mild irritant and defatting agent, especially on prolonged contact.

Eye Contact: May cause transitory stinging and tearing.

Chronic Exposure: Lactic acidosis, stupor and seizures have been reported following chronic ingestion.

Aggravation of Pre-existing Conditions: Kidney disorders.

4. First Aid Measures

Inhalation: Remove to fresh air. Not expected to require first aid measures.

Ingestion: Not expected to require first aid measures. Give several glasses of water to drink to dilute. If large amounts were swallowed, get medical advice.

Skin Contact: Remove any contaminated clothing. Wash skin with soap and water for at least 15 minutes. Get medical attention if irritation develops or persists.

Eye Contact: In case of contact, immediately flush eyes with plenty of water for at least 15 minutes, lifting upper and lower eyelids occasionally. Call a physician if irritation persists.

Note to Physician: In case of ingestion, monitor for acidosis and central nervous system changes. Exposed persons with previous kidney dysfunction may require special treatment.

5. Fire Fighting Measures

Fire: Flash point: 99C (210F) CC

Autoignition temperature: 371C (700F)

Flammable limits in air % by volume:

lel: 2.6; uel: 12.5

Material can support combustion.

Explosion: Containers may explode in heat or fire.

Fire Extinguishing Media:

Dry chemical, foam, water or carbon dioxide.

Special Information:

In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full facepiece operated in the pressure demand or other positive pressure mode. Move exposed containers from fire area, if it can be done without risk. Use water to keep fire-exposed containers cool.

6. Accidental Release Measures

Ventilate area of leak or spill. Remove all sources of ignition. Wear appropriate personal protective equipment as specified in Section 8. Isolate hazard area. Keep unnecessary and unprotected personnel from entering. Contain and recover liquid when possible. Use non-sparking tools and equipment. Collect liquid in an appropriate container or absorb with an inert material (e. g., vermiculite, dry sand, earth), and place in a chemical waste container. Do not use combustible materials, such as saw dust. Do not flush to sewer!

7. Handling and Storage

Protect container from physical damage. Store in a cool, dry, ventilated area away from sources of heat, moisture, and incompatible substances. 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.

8. Exposure Controls/Personal Protection

Airborne Exposure Limits: AIHA Workplace Environmental Exposure Level (WEEL): Vapor and Aerosol = 50ppm; Aerosol, only = 10mg/m3.

Ventilation System:

A system of local and/or general exhaust is recommended to keep employee exposures below the Airborne Exposure Limits. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area. Please refer to the ACGIH document, Industrial Ventilation, A Manual of Recommended Practices, most recent edition, for details.

Personal Respirators (NIOSH Approved):

If the exposure limit is exceeded, a half-face respirator with an organic vapor cartridge and particulate filter (NIOSH type P95 or R95 filter) may be worn for up to ten times the exposure limit or the maximum use concentration specified by the appropriate regulatory agency or respirator supplier, whichever is lowest. A full-face piece respirator with an organic vapor cartridge and particulate filter (NIOSH P100 or R100 filter) may be worn up to 50 times the exposure limit, or the maximum use concentration specified by the appropriate regulatory agency or respirator supplier, whichever is lowest. Please note that N series filters are not recommended for this material. For emergencies or instances where the exposure levels are not known, use a full-face piece positive-pressure, air-supplied respirator. WARNING: Air-purifying respirators do not protect workers in oxygen-deficient atmospheres.

Skin Protection: Wear protective gloves and clean body-covering clothing.

Eye Protection: Use chemical safety goggles. Maintain eye wash fountain and quick-drench facilities in work area.

9. Physical and Chemical Properties

Appearance: Clear oily liquid.

Odor: Odorless.

Solubility: Miscible in water.

Specific Gravity: 1.0361 @ 20C/4C

pH: No information found.

% Volatiles by volume @ 21C (70F): No information found.

Boiling Point: 188.2C (370F)

Melting Point: -59C (-74F)

Vapor Density (Air=1): 2.6

Vapor Pressure (mm Hg): 0.129 @ 25C (77F)

Evaporation Rate (BuAc=1): 0.01

10. Stability and Reactivity

Stability: Stable under ordinary conditions of use and storage.

Hazardous Decomposition Products: Carbon dioxide and carbon monoxide may form when heated to decomposition. Aldehydes or lactic, pyruvic or acetic acids may also be formed.

Hazardous Polymerization: Will not occur.

Incompatibilities: Strong oxidizing agents.

Conditions to Avoid: Heat, flames, ignition sources and incompatibles.

11. Toxicological Information

Oral rat LD50: 20g/kg. Skin rabbit LD50: 20.8g/kg.

Irritation: Eye rabbit/Draize, 500 mg/24H mild.

Investigated as a mutagen and reproductive effector.

----------Cancer Lists----------

		---NTP Carcinogen---	
Ingredient	Known	Anticipated	IARC Category
Propylene Glycol (57-55-6)	No	No	None

12. Ecological Information

Environmental Fate:

When released into the soil, this material is expected to readily biodegrade. When released into the soil, this material is expected to leach into groundwater. When released into water, this material is expected to readily biodegrade. When released into the air, this material is expected to be readily degraded by reaction with photochemically produced hydroxyl radicals. When released into the air, this material is expected to have a half-life between 1 and 10 days.

Environmental Toxicity: No information found.

13. Disposal Considerations

Whatever cannot be saved for recovery or recycling should be managed in an appropriate and approved waste disposal facility. Processing, use or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations. Dispose of container and unused contents in accordance with federal, state and local requirements.

14. Transport Information

Not regulated.

15. Regulatory Information

---------- Chemical Inventory Status - Part 1----------

Ingredient		TSCA	EC	Japan	Australia
Propylene Glycol (57-55-6)	--	Yes	Yes	Yes	Yes

----------Chemical Inventory Status - Part 2----------

		--Canada--			
Ingredient	Korea	DSL	NDSL	Phil.	
Propylene Glycol (57-55-6)	Yes	Yes	No	Yes	

----------Federal, State & International Regulations - Part 1----------

	-SARA 302-		------SARA 313------	
Ingredient	RQ	TPQ	List	Chemical Catg.
Propylene Glycol (57-55-6)	No	No	No	No

----------Federal, State & International Regulations - Part 2----------

	-RCRA-	-TSCA-	
Ingredient	CERCLA	261.33	8(d)
Propylene Glycol (57-55-6)	No	No	No

Chemical Weapons Convention: No TSCA 12(b): No CDTA: No

SARA 311/312: Acute: Yes Chronic: No Fire: No Pressure: No

Reactivity: No(Pure / Liquid)Australian Hazchem Code: None allocated.

Poison Schedule: None allocated.

This MSDS has been prepared according to the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

16. Other Information

NFPA Ratings: Health: 0 Flammability: 1 Reactivity: 0

Label Hazard Warning: CAUTION! MAY CAUSE IRRITATION TO SKIN AND EYES.

Label Precautions: Avoid contact with eyes, skin and clothing.

Wash thoroughly after handling. Label First Aid:

In case of contact, immediately flush skin or eyes with plenty of water for at least 15 minutes. Call a physician if irritation develops or persists.