SAFETY DATA SHEET

according to Regulation (EC) No. 1908/2016 Version 1.0 Revision Date 18.03.2016 Print Date 18.03.2016 GENERIC EU MSDS - NO COUNTRY SPECIFIC DATA - NO OEL DATA 1. **IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING** 1.1 **Product identifiers** Product name 1,2-Propanediol CAS-No. 57-55-6 t EC 200-338-0 1.2 Relevant identified uses of the substance or mixture and uses advised against Identified uses Manufacture of substances 1.3 Details of the supplier of the safety data sheet Company Shandong Wells Chemicals Co., Ltd t Xishui industrial zone, Guangrao county Dongying City, Shandong province 257336 CHINA Telephone +86 546-6501666 Fax +86 546-6501729 5 E-mail address info@wellschem.com.cn 1.4 **Emergency telephone number Emergency Phone #** +8613173463166 2. **HAZARDS IDENTIFICATION** 2.1 Classification of the substance or mixture Not a hazardous substance or mixture according to Regulation (EC) No. 1272/2008. This substance is not classified as dangerous according to Directive 67/548/EEC. 2.2 Label elements The product does not need to be labelled in accordance with EC directives or respective national laws. 2.3 Other hazards - none 3. **COMPOSITION/INFORMATION ON INGREDIENTS** 3.1 Substances 1,2-Dihydroxypropane; Methylethylene glycol; Monopropylene glycol; Synonyms Mono propylene glycol; Propane-1, 2-diol; alpha-Propyleneglycol; 1,2-Propylene glycol; Propylene glycol; Formula $C_3H_8O_2$ Molecular Weight 76,09 g/mol ÷ Concentration Component

Propylene carbonate		
CAS-No.	57-55-6	-
EC-No.	200-338-0	

4. FIRST AID MEASURES

4.1 Description of first aid measures

General advice

Consult a physician. Show this safety data sheet to the doctor in attendance.

If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact

Wash off with soap and plenty of water. Consult a physician.

In case of eye contact

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

If swallowed

Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

4.2 Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in

section 11

4.3 Indication of any immediate medical attention and special treatment needed no data available

5. FIREFIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

5.2 Special hazards arising from the substance or mixture on data available

5.3 Advice for firefighters Wear self contained breathing apparatus for fire fighting if necessary.

5.4 Further information no data available

6. ACCIDENTAL RELEASE MEASURES

- 6.1 Personal precautions, protective equipment and emergency procedures Use personal protective equipment. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. For personal protection see section 8.
- 6.2 Environmental precautions Do not let product enter drains.
- 6.3 Methods and materials for containment and cleaning up Soak up with inert absorbent material and dispose of as hazardous waste. Keep in suitable, closed containers for disposal.
- 6.4 Reference to other sections For disposal see section 13.

7. HANDLING AND STORAGE

- **7.1 Precautions for safe handling** Avoid contact with skin and eyes. Avoid inhalation of vapour or mist. For precautions see section 2.2.
- **7.2** Conditions for safe storage, including any incompatibilities Store in cool place. Keep container tightly closed in a dry and well-ventilated place.

hygroscopic

7.3 Specific end uses

A part from the uses mentioned in section 1.2 no other specific uses are stipulated

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Components with workplace control parameters

8.2 Exposure controls

Appropriate engineering controls

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Personal protective equipment

Eye/face protection

Safety glasses with side-shields conforming to EN166 Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

Immersion protection Material: Nitrile rubber Minimum layer thickness: 0,11 mm Break through time: > 480 min Material tested: Dermatril® (KCL 740 / Aldrich Z677272, Size M)

Splash protection Material: Nitrile rubber Minimum layer thickness: 0,11 mm Break through time: > 30 min Material tested: Dermatril® (KCL 740 / Aldrich Z677272, Size M)

data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 873000, e-mail sales@kcl.de, test method: EN374

If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an Industrial Hygienist familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

Body Protection

impervious clothing, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Control of environmental exposure

Do not let product enter drains.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

	a) Appearance	Form: liquid, clear, Colour : colourless	
	b) Odour	no data available	
	c) Odour Threshold	no data available	
	d) pH	no data available	
	e) Melting point/freezing point	Melting point/range: -60 °C - lit.	
	f) Initial boiling point and boiling range	187 °C - lit.	
	g) Flash point	103 °C - closed cup	
	h) Evaporation rate	no data available	
	i) Flammability (solid, gas)	no data available	
	 j) Upper/lower flammability or explosive limits 	Upper explosion limit: 12,5 %(V) Lower explosion limit: 2,6 %(V)	
	k) Vapour pressure	0,11 hPa at 20 °C	
	I) Vapour density	2,63 - (Air = 1.0)	
	m) Relative density	1,036 g/mL at 25 °C	
	n) Water solubility	no data available	
	o) Partition coefficient: n-octanol/water	no data available	
	p) Autoignition temperature	no data available	
	q) Decomposition temperature	no data available	
	r) Viscosity	no data available	
	s) Explosive properties	no data available	
	t) Oxidizing properties	no data available	
9.2	Other safety information		
	Relative vapour density 2,63 - (Air = 1.0)	NO'	
10.	STABILITY AND REACTIVITY		
10.1	Reactivity		
40.0	no data available	•	
10.2	Chemical stability Stable under recommended storage condition	ons.	
10.3	Possibility of hazardous reactions		
	no data available		
10.4	Conditions to avoid no data available		
10.5	Incompatible materials		
	Acid chlorides, Acid anhydrides, Oxidizing a	gents, Chloroformates, Reducing agents	
10.6	Hazardous decomposition products Other decomposition products - no data available In the event of fire: see section 5		
11.	TOXICOLOGICAL INFORMATION		
11.1	Information on toxicological effects		

Acute toxicity LD50 Oral - rat - 20.000 mg/kg

LD50 Dermal - rabbit - 20.800 mg/kg

LD50 Intramuscular - rat - 14 g/kg

LD50 Intravenous - dog - 26 g/kg

LD50 Intraperitoneal - rat - 6.660 mg/kg

LD50 Subcutaneous - rat - 22.500 mg/kg

LD50 Intravenous - rat - 6.423 mg/kg

LD50 Intraperitoneal - mouse - 9.718 mg/kg Remarks: Lungs, Thorax, or Respiration:Chronic pulmonary edema. Kidney, Ureter, Bladder:Changes in both tubules and glomeruli. Blood:Changes in spleen.

LD50 Subcutaneous - mouse - 17.370 mg/kg Remarks: Behavioral:Change in motor activity (specific assay). Behavioral:Muscle contraction or spasticity. Cyanosis

LD50 Intravenous - mouse - 6.630 mg/kg

LD50 Intravenous - rabbit - 6.500 mg/kg

Skin corrosion/irritation

Skin - Human Result: Mild skin irritation - 7 d

Serious eye damage/eye irritation

Eyes - rabbit Result: Mild eye irritation

Respiratory or skin sensitization no data available

Germ cell mutagenicity no data available

Carcinogenicity

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.

Reproductive toxicity

no data available

Specific target organ toxicity - single exposure no data available

Specific target organ toxicity - repeated exposure

no data available

Aspiration hazard no data available

Additional Information RTECS: TY2000000

Gastrointestinal disturbance, Nausea, Headache, Vomiting, Central nervous system depression

12. ECOLOGICAL INFORMATION

12.1 Toxicity

Toxicity to fish	mortality NOEC - Pimephales promelas (fathead minnow) - 52.930 mg/l - 96 h	
	LC50 - Leuciscus idus (Golden orfe) - 5.300 mg/l - 96 h	
Toxicity to daphnia and other aquatic invertebrates	mortality NOEC - Daphnia - 13.020 mg/l - 48 h	

EC50 - Daphnia magna (Water flea) - > 10.000 mg/l - 48 h

12.2	Persistence and degradability no data available				
12.3	Bioaccumulative potential no data available				
12.4	Mobility in soil no data available				
12.5	Results of PBT and vPvB assessment PBT/vPvB assessment not available as chemical safety assessment not required/not conducted				
12.6	Other adverse effects no data available				
13.	DISPOSAL CONSIDERATIONS				
13.1	Waste treatment methods				
	Product Offer surplus and non-recyclable set	olutions to a licensed disposal co	mpany.		
	Contaminated packaging Dispose of as unused product.				
14.	TRANSPORT INFORMATION		Λ.		
14.1	UN number ADR/RID: -	IMDG: -	IATA: -		
14.1 14.2		IMDG: -	IATA: -		
	ADR/RID: - UN proper shipping name ADR/RID: Not dangerous goods IMDG: Not dangerous goods	IMDG: -	IATA: -		
14.2	ADR/RID: - UN proper shipping name ADR/RID: Not dangerous goods IMDG: Not dangerous goods IATA: Not dangerous goods Transport hazard class(es)				
14.2 14.3	ADR/RID: - UN proper shipping name ADR/RID: Not dangerous goods IMDG: Not dangerous goods IATA: Not dangerous goods Transport hazard class(es) ADR/RID: - Packaging group	IMDG: -	IATA: -		
14.2 14.3 14.4	ADR/RID: - UN proper shipping name ADR/RID: Not dangerous goods IMDG: Not dangerous goods IATA: Not dangerous goods Transport hazard class(es) ADR/RID: - Packaging group ADR/RID: - Environmental hazards	IMDG: - IMDG: -	IATA: - IATA: -		
14.2 14.3 14.4 14.5	ADR/RID: - UN proper shipping name ADR/RID: Not dangerous goods IMDG: Not dangerous goods IATA: Not dangerous goods Transport hazard class(es) ADR/RID: - Packaging group ADR/RID: - Environmental hazards ADR/RID: no Special precautions for user	IMDG: - IMDG: -	IATA: - IATA: -		

This safety datasheet complies with the requirements of Regulation (EC) No. 1908/2016.

- **15.1** Safety, health and environmental regulations/legislation specific for the substance or mixture no data available
- **15.2 Chemical Safety Assessment** For this product a chemical safety assessment was not carried out

16. OTHER INFORMATION

Further information

Copyright 2016 Shandong Wells Chemicals Co. Ltd. License granted to make unlimited paper copies for internal use only.

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Our Corporation and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product.