

Safety Data Sheet

Propylene glycol

Version 1.2

Revision Date: 10/30/2014

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product name : Propylene glycol
Product Use Description : USP

Manufacturer or supplier's details

Company : Nexeo Solutions LLC
Address : 3 Waterway Square Place Suite 1000
 Woodlands, Tx. 77380
 United States of America

Emergency telephone number:

Health North America: 1-855-NEXEO4U (1-855-639-3648)
 Health International: 1-855-NEXEO4U (1-855-639-3648)
 Transport North America: CHEMTREC 800.424.9300

Additional Information: : Responsible Party: Product Safety Group
 E-Mail: msds@nexeosolutions.com
 SDS Requests: 1-855-429-2661
 SDS Requests Fax: 1-281-500-2370
 Website: www.nexeosolutions.com

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification

Not a hazardous substance or mixture.

GHS Label element

Not a hazardous substance or mixture.

Potential Health Effects

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.

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.

OSHA

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

NTP

No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

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Emergency Overview

Appearance	liquid
Colour	colourless
Odour	odourless
Hazard Summary	No information available.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Substance

Hazardous components

CAS-No.	Chemical Name	Concentration (%)
57-55-6	Propylene glycol	90 - 100

Molecular formula : C₃H₈O₂

Synonyms : 1,2-propanediol,

SECTION 4. FIRST AID MEASURES

- General advice : Do not leave the victim unattended.
- If inhaled : If unconscious place in recovery position and seek medical advice.
If symptoms persist, call a physician.
- In case of eye contact : Remove contact lenses.
Protect unharmed eye.
If eye irritation persists, consult a specialist.
- If swallowed : Keep respiratory tract clear.
Do not give milk or alcoholic beverages.
Never give anything by mouth to an unconscious person.
If symptoms persist, call a physician.

SECTION 5. FIREFIGHTING MEASURES

Hazardous combustion : No hazardous combustion products are known

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products

Specific extinguishing methods : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Further information : Standard procedure for chemical fires.

Special protective equipment for firefighters : Wear self-contained breathing apparatus for fire-fighting if necessary.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Methods and materials for containment and cleaning up : Wipe up with absorbent material (e.g. cloth, fleece).
Keep in suitable, closed containers for disposal.

SECTION 7. HANDLING AND STORAGE

Advice on safe handling : For personal protection see section 8.
Smoking, eating and drinking should be prohibited in the application area.

Conditions for safe storage : Electrical installations / working materials must comply with the technological safety standards.

Materials to avoid : No materials to be especially mentioned.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

CAS-No.	Components	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
57-55-6	Propylene glycol	TWA	10 mg/m ³	US WEEL

Personal protective equipment

Respiratory protection : No personal respiratory protective equipment normally required.

Eye protection : Safety glasses

Skin and body protection : Choose body protection in relation to its type, to the

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concentration and amount of dangerous substances,
and to the specific work-place.

Hygiene measures : General industrial hygiene practice.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : liquid

Colour : colourless

Odour : odourless

Odour Threshold : No data available

pH : not applicable

Freezing Point (Melting point/freezing point) : -60 °C (-76 °F)

Boiling Point (Boiling point/boiling range) : 187.35 °C (369.23 °F)

Flash point : 98.85 °C (209.93 °F)

Evaporation rate : 0.01

Flammability (solid, gas) : No data available
n-Butyl Acetate

Burning rate : No data available

Upper explosion limit : 12.6 %(V)

Lower explosion limit : 2.6 %(V)

Vapour pressure : 0.01 kPa @ 20 °C (68 °F)

Relative vapour density : 2.62

Relative density : 1.04

Density : 1.036 g/cm³

Bulk density : No data available

Solubility(ies)

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Water solubility	: completely soluble @ 20 °C (68 °F)
Solubility in other solvents	: No data available
Partition coefficient: n-octanol/water	: log Pow: -1.07
Auto-ignition temperature	: 371.11 °C
Thermal decomposition	: No data available
Viscosity	
Viscosity, dynamic	: 43.4 mPa.s @ 25 °C (77 °F)
Viscosity, kinematic	: < 20 mm ² /s @ 20 °C (68 °F)

SECTION 10. STABILITY AND REACTIVITY

Reactivity	: No dangerous reaction known under conditions of normal use.
Chemical stability	: Stable under normal conditions.
Possibility of hazardous reactions	: No hazards to be specially mentioned.
Conditions to avoid	: No data available

SECTION 11. TOXICOLOGICAL INFORMATION

Acute toxicity

Product:

Acute oral toxicity	: Remarks: presumed non-toxic
Acute inhalation toxicity	: Remarks: presumed non-toxic
Acute dermal toxicity	: Remarks: presumed non-toxic

Components:

57-55-6:

Acute oral toxicity	: LD50 (rat, male and female): 22,000 mg/kg
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Method: Standard Acute

Acute inhalation toxicity : LC50 (rabbit): >317042
Exposure time: 2 h
Test atmosphere: dust/mist
Assessment: The substance or mixture has no acute inhalation toxicity

Skin corrosion/irritation

Product:

Classification: presumed non-toxic
Result: presumed non-toxic

Components:

57-55-6:

Species: rabbit
Exposure time: 4 h
Method: OECD Test Guideline 404
Result: No skin irritation

Serious eye damage/eye irritation

Product:

Result: presumed non-toxic
Classification: presumed non-toxic

Components:

57-55-6:

Species: rabbit
Result: No eye irritation
Method: OECD Test Guideline 405
GLP: yes

Respiratory or skin sensitisation

Components:

57-55-6:

Test Type: Maximisation Test (GPMT)
Species: guinea pig
Method: In vivo
Result: Did not cause sensitisation on laboratory animals.

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Germ cell mutagenicity

Product:

Germ cell mutagenicity-
Assessment : mutagenicity classification is not possible

Components:

57-55-6:

Genotoxicity in vitro : Test Type: Chromosome aberration test in vitro
Test species: Human lymphocytes
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 473
Result: negative
GLP: yes

: Test Type: Ames test
Metabolic activation: Metabolic activation
Result: negative

: Test Type: Ames test
Metabolic activation: Without metabolic activation
Result: negative

Genotoxicity in vivo : Test Type: Chromosome aberration assay in vivo
Test species: rat (male)
Cell type: Bone marrow
Application Route: Oral
Exposure time: Single/5 doses in 24 hr
Dose: 0, 30, 2500, 5000 mg/kg
Result: negative

Test Type: In vivo micronucleus test
Test species: mouse (male)
Cell type: Bone marrow
Application Route: Intraperitoneal
Exposure time: Single
Dose: 2500, 5000, 10000, 15000 mg/kg
Result: negative

Test Type: Dominant lethal assay
Test species: rat (male)
Application Route: Oral
Exposure time: Single/5 doses in 24 hr
Dose: 0, 30, 2500, 5000 mg/kg
Result: negative

Germ cell mutagenicity-
Assessment : Tests on bacterial or mammalian cell cultures did not show mutagenic effects.

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Carcinogenicity

Product:

Carcinogenicity - Assessment : carcinogenicity classification is not possible

Components:

57-55-6:

Species: rat, (male)
Application Route: Oral
Exposure time: 2 yrs
Dose: 200, 400, 900, 1700 mg/kg bw
Group: yes
NOAEL: 1,700 mg/kg bw/day

Result: did not display carcinogenic properties

Species: rat, (female)
Application Route: Oral
Exposure time: 2 yrs
Dose: 300, 500, 1000, 2100 mg/kg bw
Group: yes
NOAEL: 2,100 mg/kg bw/day

Result: did not display carcinogenic properties

Species: rat, (male and female)
Application Route: inhalation (vapour)
Exposure time: up to 18 mths
Dose: 0, >350 mg/m³
NOAEL: 350 mg/m³

Result: did not display carcinogenic properties

Carcinogenicity - Assessment : No evidence of carcinogenicity in animal studies.

Reproductive toxicity

Product:

Reproductive toxicity - Assessment : reproduction classification is not possible
teratogenicity classification is not possible

Components:

57-55-6:

Effects on fertility : Species: mouse, male and female
Application Route: Oral
Dose: 0, 1820, 4800, 10100 mg/kg bw

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General Toxicity - Parent: NOAEL: 10,100 mg/kg body weight
 General Toxicity F1: NOAEL: 10,100 mg/kg body weight
 Fertility: NOAEL: 10,100 mg/kg body weight
 Result: No reproductive effects.

Effects on foetal development : Species: mouse
 Dose: 0, 52, 520, 10400 mg/kg bw/d
 Duration of Single Treatment: 10 d
 General Toxicity Maternal: NOAEL: 10,400 mg/kg body weight
 Teratogenicity: NOAEL: 10,400 mg/kg body weight
 Developmental Toxicity: NOAEL: 10,400 mg/kg body weight
 Result: No teratogenic effects.
 GLP: yes

Reproductive toxicity - Assessment : No evidence of adverse effects on sexual function and fertility, and on development, based on animal experiments.

STOT - single exposure

Product:No data available

Components:

57-55-6:No data available

STOT - repeated exposure

Product:No data available

Components:

57-55-6:No data available

Repeated dose toxicity

Components:

57-55-6:

Species: rat, male
 NOAEL: 1,700 mg/kg
 Application Route: Oral
 Exposure time: 2 yrs
 Number of exposures: daily
 Dose: 200, 400, 900, 1700 mg/kg bw
 Group: yes

Species: rat, female
 NOAEL: 2,100 mg/kg
 Application Route: Oral
 Exposure time: 2 yrs

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Number of exposures: daily
Dose: 300, 500, 1000, 2100 mg/kg bw
Group: yes

Species: rat, male
NOAEL: 2200
Application Route: Inhalation
Exposure time: 90 d
Number of exposures: 6 h/d, 5 d/wk
Dose: 0, 160, 1000, 2200 mg/m³

Species: rat, female
NOAEL: 1000
Application Route: Inhalation
Exposure time: 90 d
Number of exposures: 6 h/d, 5 d/wk
Dose: 0, 160, 1000, 2200 mg/m³
Symptoms: weight loss

Aspiration toxicity

Components:

57-55-6:

No aspiration toxicity classification

Further information

Product:

Remarks: No data available

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Product:

Toxicity to fish :
Remarks: presumed non-toxic

Toxicity to daphnia and
other aquatic inverte- :
brates Remarks: presumed non-toxic

Toxicity to algae :
Remarks: presumed non-toxic

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Components:

57-55-6:

Toxicity to fish	: LC50 (Oncorhynchus mykiss (rainbow trout)): > 100 mg/l Exposure time: 96 h Test Type: static test
Toxicity to daphnia and other aquatic invertebrates	: LC50 (Ceriodaphnia dubia): > 100 mg/l Exposure time: 48 h Test Type: static test
Toxicity to algae	: EC50 (Selenastrum capricornutum (green algae)): > 100 mg/l End point: Growth rate Exposure time: 72 h Test Type: static test Method: OECD Test Guideline 201 GLP: yes
Toxicity to bacteria	: NOEC (Pseudomonas putida): > 20,000 mg/l End point: Growth rate Exposure time: 18 h GLP:

Persistence and degradability

Components:

57-55-6:

Biodegradability	: Inoculum: activated sludge Concentration: 100 mg/l Exposure time: 28 d Remarks: Readily biodegradable
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Bioaccumulative potential

Components:

57-55-6:

Partition coefficient: n-octanol/water	: Remarks: No data available
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Mobility in soil

No data available

Other adverse effects

No data available

Product:

Regulation	40 CFR Protection of Environment; Part 82 Protection of Stratospheric Ozone - CAA Section 602 Class I Sub-
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Remarks	stances This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).
Additional ecological information	: No data available

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues	: Dispose of in accordance with all applicable local, state and federal regulations. For assistance with your waste management needs - including disposal, recycling and waste stream reduction, contact NEXEO's Environmental Services Group at 800-637-7922.
Contaminated packaging	: Empty containers should be taken to an approved waste handling site for recycling or disposal.

SECTION 14. TRANSPORT INFORMATION

IATA (International Air Transport Association): Not regulated as a dangerous good

IMDG-Code: Not regulated as a dangerous good

DOT (Department of Transportation): Not regulated as a dangerous good

SECTION 15. REGULATORY INFORMATION

OSHA Hazards : No OSHA Hazards

WHMIS Classification : : Not Rated

EPCRA - Emergency Planning and Community Right-to-Know Act

CERCLA Reportable Quantity

This material does not contain any components with a CERCLA RQ.

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SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

SARA 311/312 Hazards : No SARA Hazards

SARA 302 : SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 : SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

Clean Air Act

This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 12 (40 CFR 61).

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F).

The following chemical(s) are listed under the U.S. Clean Air Act Section 111 SOCM I Intermediate or Final VOC's (40 CFR 60.489):

57-55-6	Propylene glycol	100 %
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Clean Water Act

This product does not contain any Hazardous Substances listed under the U.S. Clean Water Act, Section 311, Table 116.4A.

This product does not contain any Hazardous Chemicals listed under the U.S. Clean Water Act, Section 311, Table 117.3.

This product does not contain any toxic pollutants listed under the U.S. Clean Water Act Section 307

US State Regulations

Massachusetts Right To Know

No components are subject to the Massachusetts Right to Know Act.

Pennsylvania Right To Know

57-55-6	Propylene glycol	90 - 100 %
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New Jersey Right To Know

57-55-6	Propylene glycol	90 - 100 %
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California Prop 65

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

The components of this product are reported in the following inventories:

Switzerland. New notified substances and declared	: y (positive listing)
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preparations		(The formulation contains substances listed on the Swiss Inventory)
United States TSCA Inventory	:	y (positive listing) (On TSCA Inventory)
Canadian Domestic Substances List (DSL)	:	y (positive listing) (All components of this product are on the Canadian DSL.)
Australia Inventory of Chemical Substances (AICS)	:	y (positive listing) (On the inventory, or in compliance with the inventory)
New Zealand. Inventory of Chemical Substances	:	n (Negative listing) (Not in compliance with the inventory)
Japan. ENCS - Existing and New Chemical Substances Inventory	:	y (positive listing) (On the inventory, or in compliance with the inventory)
Japan. ISHL - Inventory of Chemical Substances (METI)	:	y (positive listing) (On the inventory, or in compliance with the inventory)
Korea. Korean Existing Chemicals Inventory (KECI)	:	y (positive listing) (On the inventory, or in compliance with the inventory)
Philippines Inventory of Chemicals and Chemical Substances (PICCS)	:	y (positive listing) (On the inventory, or in compliance with the inventory)
China. Inventory of Existing Chemical Substances in China (IECSC)	:	y (positive listing) (On the inventory, or in compliance with the inventory)

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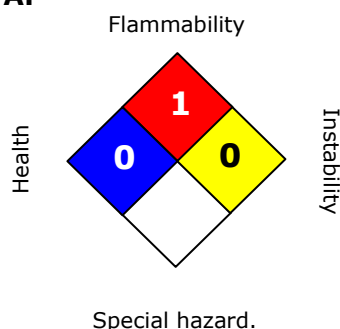
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SECTION 16. OTHER INFORMATION

Further information

NFPA:



HMIS III:

HEALTH	0
FLAMMABILITY	1
PHYSICAL HAZARD	0

0 = not significant, 1 = Slight,
2 = Moderate, 3 = High
4 = Extreme, * = Chronic

The information accumulated is based on the data of which we are aware and is believed to be correct as of the date hereof. Since this information may be applied under conditions beyond our control and with which we may be unfamiliar and since data made become available subsequently to the date hereof, we do not assume any responsibility for the results of its use. Recipients are advised to confirm in advance of need that the information is current, applicable, and suitable to their circumstances. This MSDS has been prepared by NEXEO™ Solutions EHS Product Safety Department (1-855-429-2661) MSDS@nexeosolutions.com.

Material number:

16070992, 644217, 579955, 206194, 74725, 72662, 87556, 90529, 56622, 70970, 73076, 54892, 56605, 72024, 88805, 144246, 36554, 20251, 21580, 21578, 16058093, 16058092

Key or legend to abbreviations and acronyms used in the safety data sheet			
ACGIH	American Conference of Government Industrial Hygienists	LD50	Lethal Dose 50%
AICS	Australia, Inventory of Chemical Substances	LOAEL	Lowest Observed Adverse Effect Level
DSL	Canada, Domestic Substances List	NFPA	National Fire Protection Agency
NDSL	Canada, Non-Domestic Substances List	NIOSH	National Institute for Occupational Safety & Health
CNS	Central Nervous System	NTP	National Toxicology Program
CAS	Chemical Abstract Service	NZIoC	New Zealand Inventory of Chemicals
EC50	Effective Concentration	NOAEL	No Observable Adverse Effect Level

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EC50	Effective Concentration 50%	NOEC	No Observed Effect Concentration
EGEST	EOSCA Generic Exposure Scenario Tool	OSHA	Occupational Safety & Health Administration
EOSCA	European Oilfield Specialty Chemicals Association	PEL	Permissible Exposure Limit
EINECS	European Inventory of Existing Chemical Substances	PICCS	Philippines Inventory of Commercial Chemical Substances
MAK	Germany Maximum Concentration Values	PRNT	Presumed Not Toxic
GHS	Globally Harmonized System	RCRA	Resource Conservation Recovery Act
>=	Greater Than or Equal To	STEL	Short-term Exposure Limit
IC50	Inhibition Concentration 50%	SARA	Superfund Amendments and Reauthorization Act.
IARC	International Agency for Research on Cancer	TLV	Threshold Limit Value
IECSC	Inventory of Existing Chemical Substances in China	TWA	Time Weighted Average
ENCS	Japan, Inventory of Existing and New Chemical Substances	TSCA	Toxic Substance Control Act
KECI	Korea, Existing Chemical Inventory	UVCB	Unknown or Variable Composition, Complex Reaction Products, and Biological Materials
<=	Less Than or Equal To	WHMIS	Workplace Hazardous Materials Information System
LC50			Lethal Concentration 50%