SAFETY DATA SHEET

1. Product and Company Identification

Product Identifier	**Peri One System Developer**
Other means of identification	Not available
Recommended use	Dental film developer
Recommended restrictions	None known.
Manufacturer information	maxill inc. 80 Elm Street St. Thomas, ON N5R 6C8 CA Phone: 519-631-7370 Fax: 519-531-3388 Website: maxill.com
Supplier	See above.
Emergency Response Number	ChemTel 1-800-255-3924, outside US and Canada, 1-813-248-0585 CANUTEC: 613-996-6666

2. Hazards Identification

Physical hazards	Not classified.	
Health hazards	Skin corrosion/irritation	Category 2
	Serious eye damage/eye irritation	Category 1
	Sensitization, skin	Category 1
	Specific target organ toxicity, repeated exposure	Category 2
	Reproductive toxicity	Category 1 B
Environmental hazards	Not classified.	
WHMIS 2015 defined hazards	Not classified	
Label elements		
Signal word	Danger	
Hazard statement	Causes skin irritation. Causes serious eye damage. May cause an allergic skin reaction. May cause damage to organs through prolonged or repeated exposure. May damage fertility or the unborn child. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood.	
Precautionary statement		
Prevention	Avoid breathing mist/vapors/spray. Contaminated work clothing must not be allowed out of the workplace. In case of inadequate ventilation wear respiratory protection. Wash thoroughly after handling. Wear protective gloves/eye protection/face protection.	

Response	IF ON SKIN: Wash with plenty of water. If skin irritation or rash occurs: Get medical advice/attention. Specific treatment (see information on this label). Take off contaminated clothing and wash it before reuse. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/doctor.
Storage	Store away from incompatible materials. Store locked up
Disposal	Dispose of contents/container in accordance with local/regional/national/international regulations.
WHMIS 2015: Health Hazard(s) not otherwise classified (HHNOC)	None known
WHMIS 2015: Physical Hazard(s) not otherwise classified (PHNOC)	None known
Hazard(s) not otherwise classified (HNOC)	None known.
Supplemental information	Not applicable.

3. Composition/Information on Ingredients

Mixture

Chemical name	Common name and synonyms	CAS number	%
Sodium metabisulfite		7681-57-4	1-5
1,4-Benzenediol		123-31-9	1-5
Sodium tetraborate		1303-96-4	0.5-1.5
Tetrasodium salt of ethylenediaminetetracetic acid tetrahydrate		13235-36-4	0.1-1

4. First Aid Measures

Inhalation	IF INHALED: Remove person to fresh air and keep comfortable for breathing. If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician.
Skin contact	IF ON SKIN: Wash with plenty of water. If skin irritation or rash occurs: Get medical advice/attention. Specific treatment (see information on this label). Take off contaminated clothing and wash it before reuse.
Eye contact	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/doctor.
Ingestion	Rinse mouth. Do not induce vomiting. Never give anything by mouth if victim is unconscious, or is convulsing. Obtain medical attention.
Most important symptoms/effects, acute and delayed	Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result. Skin irritation. May cause redness and pain. May cause an allergic skin reaction. Dermatitis. Rash. May cause allergic respiratory reaction. Prolonged exposure may cause chronic effects.

Indication of immediate medical attention and special treatment needed	Symptoms may be delayed.
General information	If you feel unwell, seek medical advice (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance. Avoid contact with eyes and skin. Wear rubber gloves and safety glasses with side shields. Keep out of reach of children.

5. Fire Fighting Measures

Suitable extinguishing media	Water fog. Foam. Dry chemical powder. Carbon dioxide.
Unsuitable extinguishing media	Not available.
Specific hazards arising from the chemical	Firefighters should wear a self-contained breathing apparatus.
Special protective equipment and precautions for firefighters	Firefighters should wear full protective clothing including self contained breathing apparatus.
Fire-fighting equipment/instructions	Move containers from fire area if you can do so without risk.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials.
General fire hazards	No unusual fire or explosion hazards noted.
Hazardous combustion products	May include and are not limited to: Oxides of nitrogen. Oxides of sulfur.

6. Accidental Release Measures

Personal precautions, protective equipment and emergency procedures	Keep people away from and upwind of spill/leak. Keep out of low areas. Wear appropriate protective equipment and clothing during clean-up. Do not breathe mist or vapor. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.
Methods and materials for containment and cleaning up	Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Cover with plastic sheet to prevent spreading. Absorb in vermiculite, dry sand or earth and place into containers. Never return spills in original containers for re-use. Clean surface thoroughly to remove residual contamination. Following product recovery, flush area with water. For waste disposal, see section 13 of the SDS.
Environmental precautions	Do not discharge into lakes, streams, ponds or public waters.

7. Handling and Storage

Precautions for safe handling	Avoid contact with eyes, skin and clothing. Do not breathe mist or vapor. Avoid prolonged or repeated skin contact with this material. Wear appropriate personal protective equipment. Use only with adequate ventilation. Observe good industrial hygiene practices. Wash thoroughly after handling. When using do not eat or drink.
Conditions for safe storage, including any incompatibilities	Store in a well-ventilated place. Store away from incompatible materials (see Section 10 of the SDS). Keep out of reach of children.

8. Exposure Controls/Personal Protection

Occupational exposure limits

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value
1,4-Benzenediol (CAS 123-31-9)	PEL	2 mg/m3

US. ACGIH Threshold Limit Values

Components	Type	Value	Form
1,4-Benzenediol (CAS 123-31-9)	TWA	1 mg/m3	
Sodium tetraborate (CAS 1303-96-4)	STEL	6 mg/m3	Inhalable Fraction
Sodium metabisulfite (CAS 7681-57-4)	TWA	5 mg/m3	

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value
1,4-Benzenediol (CAS 123-31-9)	Ceiling	2 mg/m3
Sodium tetraborate (CAS 1303-96-4)	TWA	5 mg/m3
Sodium metabisulfite (CAS 7681-57-4)	TWA	5 mg/m3

Biological limit values No biological exposure limits noted for the ingredient(s).

Exposure guidelines Chemicals listed in section 3 that are not listed here do not have established limit values for ACGIH or OSHA PEL.

Appropriate engineering controls Ensure adequate ventilation.

Individual protection measures, such as personal protective equipment

Eye/face protection Wear safety glasses with side shields (or goggles) and a face shield.

Skin protection

Hand protection Rubber gloves. Confirm with a reputable supplier first.

Other As required by employer code.

Respiratory protection Where exposure guideline levels may be exceeded, use an approved NIOSH respirator.

Thermal hazards Not applicable.

General hygiene considerations Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and immediately after handling the product. When using do not eat or drink.

9. Physical and Chemical Properties

Appearance Clear

Physical state Liquid.

Form Liquid.

Color Pale yellow

Odor Sulfur dioxide

Odor threshold Not available.

pH 10.3

Melting point/freezing point Not available.

Initial boiling point and boiling range	> 212 °F (> 100 °C)
Pour point	Not available.
Specific gravity	1.09
Partition coefficient (n-octanol/ water)	Not available.
Flash point	Not available.
Evaporation rate	Not available.
Flammability (solid, gas)	Not available.
Upper/lower flammability or explosive limits	
Flammability limit - lower (%)	Not available.
Flammability limit - upper (%)	Not available.
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.
Vapor pressure	Not available.
Vapor density	Not available.
Relative density	Not available.
Solubility(ies)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	Not available.

10. Stability and Reactivity

Reactivity	May react with incompatible materials.
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
Chemical stability	Stable under recommended storage conditions.
Conditions to avoid	Do not mix with other chemicals.
Incompatible materials	Strong oxidizing agents.
Hazardous decomposition products	May include and are not limited to: Oxides of nitrogen. Sulfur oxide.

11. Toxicological Information

Routes of exposure	Eye, Skin contact, Inhalation, Ingestion.
Information on likely routes of exposure	
Ingestion	May cause stomach distress, nausea or vomiting.
Inhalation	May cause damage to organs by inhalation. May cause allergy or asthma symptoms or breathing difficulties if inhaled.
Skin contact	Causes skin irritation. May cause an allergic skin reaction.
Eye contact	Causes serious eye damage.
Symptoms related to the physical, chemical and toxicological characteristics	Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result. May cause an allergic skin reaction. Skin irritation. May cause redness and pain. Dermatitis. Rash.
Information on toxicological effects	
Acute toxicity	Contains a potential skin sensitizer.

Components	Species	Test Results
1,4-Benzenediol (CAS 123-31-9)		
Acute		
Dermal		
LD50	Guinea pig	> 1000 mg/kg
	Mouse	> 3840 mg/kg
	Rabbit	> 2000 mg/kg
	Rat	> 900 mg/kg
Inhalation		
LD50		
Oral		
LD50	Cat	50 mg/kg
	Dog	299 mg/kg
	Guinea pig	550 mg/kg
	Mouse	245 mg/kg
	Rabbit	540 mg/kg
	Rat	320 mg/kg
Sodium tetraborate (CAS 1303-96-4)		
Acute		
Dermal		
LD50	Rabbit	10000 mg/kg
Inhalation		
LD50	Rat	0.002 mg/l/4h
Oral		
LD50	Mouse	2000 mg/kg
	Rat	396 mg/kg
Sodium metabisulfite (CAS 7681-57-4)		
Acute		
Dermal		
LD50	Guinea pig	1000 mg/kg
	Rat	2000 mg/kg
Inhalation		
LD50	Not available	
Oral		
LD50	Rat	1131 mg/kg
	Sheep	2515 mg/kg
		2.5 g/kg

Components	Species	Test Results
Tetrasodium salt of ethylenediaminetetracetic acid tetrahydrate (CAS 13235-36-4)		
Acute		
Dermal		
LD50	Not available	
Inhalation		
LD50	Not available	
Oral		
LD50	Rat	945 mg/kg

Skin corrosion/irritation	Causes skin irritation.
Exposure minutes	Not available.
Erythema value	Not available.
Oedema value	Not available.
Serious eye damage/eye irritation	Causes serious eye damage.
Corneal opacity value	Not available.
Iris lesion value	Not available.
Conjunctival reddening value	Not available.
Conjunctival oedema value	Not available.
Recover days	Not available.
Respiratory or skin sensitization	
ACGIH sensitization	
1,4-Benzenediol (CAS 123-31-9)	Dermal sensitization
Respiratory sensitization	Not classified.
Skin sensitization	May cause an allergic skin reaction.
Mutagenicity	Not classified.
Carcinogenicity	See below.
IARC Monographs. Overall Evaluation of Carcinogenicity	
1,4-Benzenediol (CAS 123-31-9)	Volume 15, Supplement 7, Volume 71 - 3 Not classifiable as to carcinogenicity to humans.
Sodium metabisulfite (CAS 7681-57-4)	Volume 54 - 3 Not classifiable as to carcinogenicity to humans.
US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)	
Not listed.	
Reproductive toxicity	May damage fertility or the unborn child.
Teratogenicity	Not classified.
Specific target organ toxicity - single exposure	Not classified.
Specific target organ toxicity - repeated exposure	May cause damage to organs through prolonged or repeated exposure.
Aspiration hazard	Not classified.
Chronic effects	Prolonged inhalation may be harmful.

12. Ecological Information

Ecotoxicity See below

Ecotoxicological data

Components		Species	Test Results
1,4-Benzenediol (CAS 123-31-9)			
Algae	IC50	Algae	13.5 mg/L, 72 Hours
Crustacea	EC50	Daphnia	0.29 mg/L, 48 Hours
Aquatic			
Crustacea	EC50	Water flea (Daphnia magna)	0.12 - 0.15 mg/L, 48 hours
Fish	LC50	Rainbow trout,donaldson trout (Oncorhynchus mykiss)	0.044 mg/L, 96 hours
Sodium metabisulfite (CAS 7681-57-4)			
Algae	IC50	Algae	48 mg/L, 72 Hours
Tetrasodium salt of ethylenediaminetetracetic acid tetrahydrate (CAS 13235-36-4)			
Aquatic			
Fish	LC50	Bluegill (Lepomis macrochirus)	472 - 500 mg/L, 96 hours

Persistence and degradability No data is available on the degradability of this product.

Bioaccumulative potential No data available.

Mobility in soil No data available.

Mobility in general Not available.

Other adverse effects No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal Considerations

Disposal instructions Dispose of contents/container in accordance with local/regional/national/international regulations.

Local disposal regulations Dispose in accordance with all applicable regulations.

Hazardous waste code The waste code should be assigned in discussion between the user, the producer and the waste disposal company.

Waste from residues / unused products Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).

Contaminated packaging Since emptied containers may retain product residue, follow label warnings even after container is emptied.

14. Transport Information

Transport of Dangerous Goods (TDG) Proof of Classification In accordance with Part 2.2.1 (SOR/2014-152) of the Transportation of Dangerous Goods Regulations, we certify that the classification of this product is correct as of the SDS date of issue.

U.S. Department of Transportation (DOT)

Basic shipping requirements:

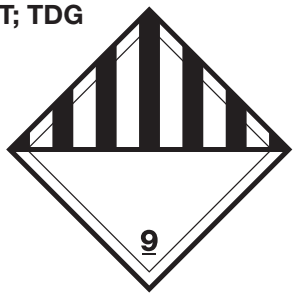
UN number	UN3082
Proper shipping name	Environmentally hazardous substances, liquid, n.o.s.
Technical name	1,4-Benzenediol
Hazard class	9
Packing group	III
Marine pollutant	Yes
Special provisions	8, 146, 173, 335, IB3, T4, TP1, TP29

Transportation of Dangerous Goods (TDG - Canada)

Basic shipping requirements:

UN number	UN3082
Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
Technical name	1,4-Benzenediol
Hazard class	9
Packing group	III
Special provisions	16, 99

DOT; TDG



15. Regulatory Information

Canadian federal regulations This product has been classified in accordance with the hazard criteria of the HPR and the SDS contains all the information required by the HPR.

Canada CEPA Schedule I: Listed substance

1,4-Benzenediol (CAS 123-31-9) Listed.

Canada SNAc Reporting Requirements: Listed substance/Publication date

1,4-Benzenediol (CAS 123-31-9) 12/21/2011 LISTED

Export Control List (CEPA 1999, Schedule 3)

Not listed.

Greenhouse Gases

Not listed.

Precursor Control Regulations

Not regulated.

WHMIS 2015 Exemptions Controlled

US federal regulations This product is a “Hazardous Chemical” as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

1,4-Benzenediol (CAS 123-31-9) Listed.

US EPCRA Section 304 Extremely Haz. Subs. & CERCLA Haz. Subs.: Section 304 EHS reportable quantity

1,4-Benzenediol (CAS 123-31-9) 100 LBS

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories Immediate Hazard - Yes
Delayed Hazard - Yes
Fire Hazard - No
Pressure Hazard - No
Reactivity Hazard - No

SARA 302 Extremely hazardous substance No

SARA 311/312 Hazardous chemical No

SARA 313 (TRI reporting) See below

Chemical name	CAS number	% by wt.
1,4-Benzenediol	123-31-9	1.6

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

1,4-Benzenediol (CAS 123-31-9)

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Safe Drinking Water Act (SDWA) Not regulated.

Drug Enforcement Administration (DEA). List 2, Essential Chemicals (21 CFR 1310.02(b) and 1310.04(f)(2) and Chemical Code Number

Not listed.

Drug Enforcement Administration (DEA). List 1 & 2 Exempt Chemical Mixtures (21 CFR 1310.12(c))

Not regulated.

DEA Exempt Chemical Mixtures Code Number

Not regulated.

Food and Drug Administration (FDA) Not regulated.

US state regulations See below

US - California Hazardous Substances (Director's): Listed substance

1,4-Benzenediol (CAS 123-31-9)	Listed.
Sodium tetraborate (CAS 1303-96-4)	Listed.
Sodium metabisulfite (CAS 7681-57-4)	Listed.

US - Illinois Chemical Safety Act: Listed substance

1,4-Benzenediol (CAS 123-31-9)

US - Louisiana Spill Reporting: Listed substance

1,4-Benzenediol (CAS 123-31-9)	Listed.

US - Minnesota Haz Subs: Listed substance

1,4-Benzenediol (CAS 123-31-9)	Listed.
Sodium tetraborate (CAS 1303-96-4)	Listed.
Sodium metabisulfite (CAS 7681-57-4)	Listed.

US - New Jersey RTK - Substances: Listed substance

1,4-Benzenediol (CAS 123-31-9)	
Sodium tetraborate (CAS 1303-96-4)	Listed.
Sodium metabisulfite (CAS 7681-57-4)	

US - Texas Effects Screening Levels: Listed substance

1,4-Benzenediol (CAS 123-31-9)	Listed.
Sodium tetraborate (CAS 1303-96-4)	Listed.
Sodium metabisulfite (CAS 7681-57-4)	Listed.
Tetrasodium salt of ethylenediaminetetracetic acid tetrahydrate (CAS 13235-36-4)	Listed.

US. Massachusetts RTK - Substance List

1,4-Benzenediol (CAS 123-31-9)	
Sodium tetraborate (CAS 1303-96-4)	Listed.
Sodium metabisulfite (CAS 7681-57-4)	

US. New Jersey Worker and Community Right-to-Know Act

1,4-Benzenediol (CAS 123-31-9)

US. Pennsylvania RTK - Hazardous Substances

1,4-Benzenediol (CAS 123-31-9)	
Sodium tetraborate (CAS 1303-96-4)	Listed.
Sodium metabisulfite (CAS 7681-57-4)	

US. Rhode Island RTK

1,4-Benzenediol (CAS 123-31-9)

US. California Proposition 65

Not Listed.

Inventory status

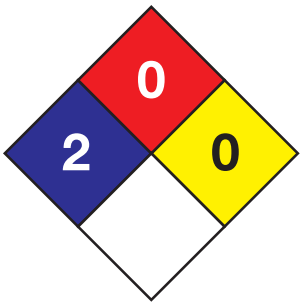
Country(s) or region	Inventory name	On inventory (yes/no)*
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

16. Other Information

LEGEND	
Severe	4
Serious	3
Moderate	2
Slight	1
Minimal	0

HEALTH	* 2
FLAMMABILITY	0
PHYSICAL HAZARD	0
PERSONAL PROTECTION	X



Disclaimer Information contained herein was obtained from sources considered technically accurate and reliable. While every effort has been made to ensure full disclosure of product hazards, in some cases data is not available and is so stated. Since conditions of actual product use are beyond control of the supplier, it is assumed that users of this material have been fully trained according to the requirements of all applicable legislation and regulatory instruments. No warranty, expressed or implied, is made and supplier will not be liable for any losses, injuries or consequential damages which may result from the use of or reliance on any information contained in this document.

Issue date 15-June-2018

Version # 01

Effective date 15-June-2018

Other information For an updated SDS, please contact the supplier/manufacturer listed on the first page of the document.