

SAFETY DATA SHEET

1. Product and Company Identification

Product identifier Auto 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: 519-631-3388 Website: maxill.com

Supplier

See above.

Emergency Response

ChemTel: 1-800-255-3924, outside US and Canada, 1-813-248-0585

CANUTEC: 1-888-CAN-UTEC (226-8832)

2. Hazards Identification

Physical hazards Not classified.

Health hazards Skin corrosion/irritation

Category 2 Serious eye damage/eye irritation Category 1 Sensitization, respiratory Category 1 Sensitization, skin Category 1 Category 2

Specific target organ toxicity, repeated

exposure

Environmental hazards

WHMIS 2015 defined hazards

Label elements

Not classified. Not classified



Signal word

Danger

Hazard statement

Causes skin irritation.

Causes serious eye damage.

May cause allergy or asthma symptoms or breathing difficulties if inhaled.

May cause an allergic skin reaction.

May cause damage to organs through prolonged or repeated exposure.

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.

IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. If experiencing respiratory symptoms: Call a POISON CENTER/doctor.

Storage Store away from incompatible materials.

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)

Hazard(s) not otherwise classified (HNOC)

None known.

None known

Supplemental information

Not applicable.

3. Com	position	/Information	n on Ingredients	s
	P			_

Mixture			
Chemical name	Common name and synonyms	CAS number	%
Sodium metabisulfite		7681-57-4	4.4
1,4-Benzenediol		123-31-9	1.6
Sodium carbonate		497-19-8	1.3
Pentanedial		111-30-8	0.3
Tetrasodium salt of ethylenediaminetetracetic acid tetrahydrate		13235-36-4	0.2

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.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present Eye contact

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

General information

Symptoms may be delayed.

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

Unsuitable extinguishing

media

Water fog. Foam. Dry chemical powder. Carbon dioxide.

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.

MP-REF-60048S Page: 2 of 10 Rev.1: 2021-04-08 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. Store in a well-ventilated place.

Conditions for safe storage,

including any incompatibilities

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

US. ACGIH Threshold Limit Values

Components	Туре	Value	
1,4-Benzenediol (CAS 123-31-9)	TWA	1 mg/m3	
Pentanedial (CAS 111-30-8)	Ceiling	0.05 ppm	
Sodium metabisulfite (CAS 7681-57-4)	TWA	5 mg/m3	

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Туре	Value	
1,4-Benzenediol (CAS 123-31-9)	Ceiling	2 mg/m3	
Pentanedial (CAS 111-30-8)	Ceiling	0.8 mg/m3	
		0.2 ppm	
Sodium metabisulfite (CAS	TWA	5 mg/m3	

7681-57-4)

Biological limit valuesNo 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.

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Color Pale yellow Odor Sulfur dioxide **Odor threshold** Not available.

pН 10 1

Not available. Melting point/freezing point Initial boiling point and boiling > 212 °F (> 100 °C)

range

Pour point Not available.

Specific gravity 1.08

Partition coefficient Not available.

(n-octanol/water)

Not available. Flash point **Evaporation rate** Not available. Flammability (solid, gas) Not applicable. 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. Not available. Relative density Not available. Solubility(ies) Not available. **Auto-ignition temperature** available. **Decomposition** temperature Not Not available. Viscosity

10. Stability and Reactivity

Reactivity May react with incompatible materials.

Possibility of hazardous

reactions

No dangerous reaction known under conditions of normal use.

Stable under recommended storage conditions. **Chemical stability**

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 123-3	31-9)	
Acute		
Dermal		
LD50	Guinea pig	> 1000 mg/kg
	Mouse	> 3840 mg/kg
	Rabbit	> 2000 mg/kg
	Rat	> 900 mg/kg
Inhalation		
LC50		
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
Pentanedial (CAS 111-30-8)		
Acute		
Dermal		
LD50	Rabbit	2560 mg/kg
	Rat	600 mg/kg
Inhalation		
LC50	Rat	24 mg/L, 4 Hours
		0.1 mg/l/4h
Oral		
LD50	Mouse	100 mg/kg
	Rat	66 mg/kg
Sodium carbonate (CAS 497	7-19-8)	
Acute		
Dermal		
LD50	Rat	> 2000 mg/kg
Inhalation		
LC50	Guinea pig	400 mg/m3
		0.8 mg/L, 2 Hours
	Mouse	1.2 mg/L, 2 Hours
	Rat	2.3 mg/L, 2 Hours
Oral		
LD50	Rat	4090 mg/kg
Sodium metabisulfite (CAS 7	7681-57-4)	
Acute		
Dermal		
LD50	Guinea pig	1000 mg/kg
	Rat	2000 mg/kg
Inhalation		
LC50	Not available	
Oral	Det	4404 "
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

LC50 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

Conjunctival oedema valueNot available.Recover daysNot available.

Respiratory or skin sensitization

ACGIH sensitization

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

Pentanedial (CAS 111-30-8)

Dermal sensitization

Dermal sensitization

Respiratory sensitization

Respiratory sensitization May cause allergy or asthma symptoms or breathing difficulties if inhaled.

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 Not classified.

Teratogenicity Not classified.

Specific target organ toxicity - Not classified.

single exposure

Specific target organ toxicity - May cause damage to organs through prolonged or repeated exposure.

repeated exposure

Aspiration hazard Not classified.

Chronic effects Prolonged inhalation may be harmful.

12. Ecological Information

Ecotoxicity See below **Ecotoxicological data** Components **Test Results Species** 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 EC50 Water flea (Daphnia magna) 0.12 - 0.15 mg/L, 48 hours Crustacea Fish Rainbow trout, donaldson trout LC50 0.044 mg/L, 96 hours (Oncorhynchus mykiss)

Components		Species	Test Results
Pentanedial (CAS 111-30-8)			
Algae	IC50	Algae	0.61 mg/L, 72 Hours
Crustacea	EC50	Daphnia	14 mg/L, 48 Hours
Sodium carbonate (CAS 497-19-	-8)		
Crustacea	EC50	Daphnia	265 mg/L, 48 Hours
Aquatic			
Crustacea	EC50	Water flea (Ceriodaphnia dubia)	156.6 - 298.9 mg/L, 48 hours
Fish	LC50	Bluegill (Lepomis macrochirus)	300 mg/L, 96 hours
Sodium metabisulfite (CAS 7681	-57-4)		
Algae	IC50	Algae	48 mg/L, 72 Hours
Tetrasodium salt of ethylenedian	ninetetracetic a	cid tetrahydrate (CAS 13235-36-4)	
Aquatic			
Fish	LC50	Bluegill (Lepomis macrochirus)	472 - 500 mg/L, 96 hours
Persistence and degradability	No data is a	available on the degradability of this product.	
Bioaccumulative potential	No data av	ailable	

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

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).

Empty containers should be taken to an approved waste handling site for recycling or disposal. Contaminated packaging Since emptied containers may retain product residue, follow label warnings even after container is

emptied.

14. Transport Information

In accordance with Part 2.2.1 (SOR/2014-152) of the Transportation of Dangerous Goods **Transport of Dangerous Goods** (TDG) Proof of Classification 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 Ш **Packing group** Marine pollutant

8, 146, 173, 335, IB3, T4, TP1, TP29 **Special provisions**

Transportation of Dangerous Goods (TDG - Canada)

Basic shipping requirements:

UN number

ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. Proper shipping name

Technical name 1.4-Benzenediol

Hazard class Packing group Ш **Special provisions** 16.99



15. Regulatory Information

Listed.

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)

Canada SNAc Reporting Requirements: Listed substance/Publication date

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

Export Control List (CEPA 1999, Schedule 3)

Not listed.

Greenhouse Gases

Not listed.

Precursor Control Regulations

Not regulated.

Controlled WHMIS 2015 Exemptions

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)

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Immediate Hazard - Yes **Hazard categories**

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

SARA 302 Extremely

hazardous substance

Nο

SARA 311/312 Hazardous

Nο

chemical

SARA 313 (TRI reporting)

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

Not regulated.

(SDWA)

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

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 Not regulated.

Administration (FDA)

US state regulations See below

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

1,4-Benzenediol (CAS 123-31-9)Listed.Pentanedial (CAS 111-30-8)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.Pentanedial (CAS 111-30-8)Listed.Sodium metabisulfite (CAS 7681-57-4)Listed.

US - New Jersey RTK - Substances: Listed substance

1,4-Benzenediol (CAS 123-31-9) Pentanedial (CAS 111-30-8)

Sodium metabisulfite (CAS 7681-57-4)

US - Texas Effects Screening Levels: Listed substance

1,4-Benzenediol (CAS 123-31-9)Listed.Pentanedial (CAS 111-30-8)Listed.Sodium carbonate (CAS 497-19-8)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)

Pentanedial (CAS 111-30-8)

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)

Pentanedial (CAS 111-30-8)

Sodium metabisulfite (CAS 7681-57-4)

US. Rhode Island RTK

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

US. California Proposition 65

California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins.

Inventory status

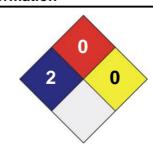
Country(s) or region	Inventory name	On inventory (yes/no)*
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

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

16. Other Information







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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.

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Version # 02

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

document.

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