SAFETY DATA SHEET

AO2 Gel

Section 1. Identification

Product identifier : AO2 Gel

Product code : 07-10105, 1046230, 1000333, 1000334

Product type : Liquid.

Relevant identified uses of the substance or mixture and uses advised against

Identified uses

Industrial applications: Sanitizer.

Approved for use in Food & Beverage plants. Readily biodegradable according to the OECD 301D method.

Uses advised against

Only use this product as directed. Read label before using. This product is not intended for domestic use.

Supplier's details : Sani-Marc Inc.
42 rue de l'Artisan
Victoriaville, Qc
G6P 7E3
1-819-758-1541

Emergency telephone number (with hours of operation) : 1-800-361-7691 (8am - 5pm Monday to Thursday) (8am - 4pm Friday)

Section 2. Hazard identification

Classification of the substance or mixture : SKIN CORROSION - Category 1
SERIOUS EYE DAMAGE - Category 1

GHS label elements

Hazard pictograms :



Signal word : Danger

Hazard statements : H314 - Causes severe skin burns and eye damage.

Precautionary statements

Prevention : P260 - Do not breathe vapor.
P264 - Wash thoroughly after handling.
P280 - Wear protective gloves: Chemical-resistant, impervious gloves . Wear protective clothing: Recommended: safety apron. Wear eye or face protection: Recommended: Safety Glasses.

Response : P301 + P310, P330, P331 - IF SWALLOWED: Immediately call a POISON CENTER or doctor. Rinse mouth. Do NOT induce vomiting.
P303 + P361 + P353, P310 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. Immediately call a POISON CENTER or doctor.
P304 + P340, P310 - IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER or doctor.
P305 + P351 + P338, P310 - 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 or doctor.
P363 - Wash contaminated clothing before reuse.

Section 2. Hazard identification

Storage : Keep under supervision.

Disposal : P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.

Supplemental label elements :

Section 3. Composition/information on ingredients

Substance/mixture : Mixture

Other means of identification : Not available.

Ingredient name	% (w/w)	CAS number
methanesulphonic acid	≥10 - ≤30	CAS: 75-75-2
citric acid	≥5 - ≤10	CAS: 77-92-9
Ethanol, 2,2'-iminobis-, N-soya alkyl derivs.	≥1 - ≤5	CAS: 73246-96-5
Isopropyl alcohol	≥1 - ≤5	CAS: 67-63-0
Hydrofluoric acid	≥0.1 - ≤1	CAS: 7664-39-3

Ranges if listed above for hazardous ingredient(s) are prescribed ranges. The actual concentration(s) or actual concentration range(s) are being withheld as a trade secret.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First-aid measures

Description of necessary first aid measures

Eye contact : In case of contact with eyes, flush with fresh water. Check for and remove any contact lenses. Continue rinsing. If irritation persists, get medical attention. Chemical burns must be treated promptly by a physician. Get medical attention if blistering occurs or redness persists.

Inhalation : Move victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. Get medical attention if adverse health effects persist or are severe. Maintain an open airway.

Skin contact : Rinse with water. Wash contaminated skin with soap and water. Remove contaminated clothing and wash it before reuse. Chemical burns must be treated promptly by a physician. Get medical attention if blistering occurs or redness persists. First treatment with 2.5% calcium gluconate gel.

Ingestion : Rinse mouth with water. Do not induce vomiting unless directed to do so by medical personnel. Chemical burns must be treated promptly by a physician. Get medical attention if symptoms occur.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact : May cause eye burn

Inhalation : No known significant effects or critical hazards.

Skin contact : May cause skin burns

Ingestion : May cause burns to mouth, throat and stomach.

Over-exposure signs/symptoms

Section 4. First-aid measures

Eye contact : Adverse symptoms may include the following:
pain
watering
redness

Inhalation : Adverse symptoms may include the following:
respiratory tract irritation
coughing

Skin contact : Adverse symptoms may include the following:
pain or irritation
redness
blistering may occur

Ingestion : Adverse symptoms may include the following:
stomach pains

Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

Specific treatments : No specific treatment.

Protection of first-aiders : No action should be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing them, or wear gloves.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media : Use an extinguishing agent suitable for the surrounding fire.

Unsuitable extinguishing media : None known.

Specific hazards arising from the chemical : In a fire or if heated, a pressure increase will occur and the container may burst.

Hazardous thermal decomposition products : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
sulfur oxides

Special protective actions for fire-fighters : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action should be taken involving any personal risk or without suitable training.

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel : No action should be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Do not breathe vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

Section 6. Accidental release measures

For emergency responders : If specialized clothing is required to deal with the spillage, take note of any information on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Eye/face protection : Continued or severe exposures might required to wear a face shield or chemical splash goggles. It is minimally suggested to wear safety glasses while using or handling this product.

Hand protection : It is suggested to wear chemical-reisitant gloves while using or handling this product.

Body protection : It is suggested to wear safety apron while using or handling this product.

Other skin protection : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection : No specific protective equipment required under normal use conditions.

Environmental precautions : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods and materials for containment and cleaning up

Small spill : Stop leak if without risk. Move containers from spill area. Absorb with an inert material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Large spill : Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. The spilled material may be neutralized with sodium carbonate, sodium bicarbonate or sodium hydroxide. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations.

Section 7. Handling and storage

Precautions for safe handling

Protective measures : Put on appropriate personal protective equipment (see Section 8). Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not ingest. If during normal use the material presents a respiratory hazard, use only with adequate ventilation or wear appropriate respirator. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Keep away from alkalis. Empty containers retain product residue and can be hazardous. Do not reuse container.

Advice on general occupational hygiene : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See Section 8 for additional information on hygiene measures.

Conditions for safe storage, including any incompatibilities : Store in accordance with local regulations. Separate from alkalis. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. Keep out of reach of children. Store away from incompatible materials;

Reactive or incompatible with alkali.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
Isopropyl alcohol	**CA Alberta Provincial (Canada)** STEL: 500 ppm. TWA: 400 ppm. **CA Saskatchewan Provincial (Canada, 4/2021)** STEL 15 minutes: 400 ppm. TWA 8 hours: 200 ppm. **CA British Columbia Provincial (Canada, 9/2024)** TWA 8 hours: 200 ppm. STEL 15 minutes: 400 ppm. **CA Ontario Provincial (Canada, 6/2019)** TWA 8 hours: 200 ppm. STEL 15 minutes: 400 ppm. **CA Quebec Provincial (Canada, 2/2024)** TWAEV 8 hours: 200 ppm. STEV 15 minutes: 400 ppm.
hydrofluoric acid	**CA Saskatchewan Provincial (Canada, 4/2021)** CEIL 15 minutes: 2 ppm (measured as F). TWA 8 hours: 0.5 ppm (measured as F). **CA British Columbia Provincial (Canada, 9/2024)** Absorbed through skin. C: 2 ppm (as F). **CA Ontario Provincial (Canada, 6/2019)** Absorbed through skin. TWA 8 hours: 0.5 ppm (as F). Ceiling Limit: 2 ppm (as F). **CA Quebec Provincial (Canada, 2/2024)** Absorbed through skin. STEV 15 minutes: 3 ppm (as F). TWAEV 8 hours: 0.5 ppm (as F). **CA Alberta Provincial (Canada, 3/2023)** C: 2 ppm (as F). C: 1.6 mg/m³ (as F). OEL 8 hours: 0.4 mg/m³ (as F). OEL 8 hours: 0.5 ppm (as F).

Biological exposure indices

No exposure indices known.

Appropriate engineering controls : If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing.

Section 8. Exposure controls/personal protection

Eye/face protection : Continued or severe exposures might required to wear a face shield or chemical splash goggles. It is minimally suggested to wear safety glasses while using or handling this product.

Skin protection

Hand protection : It is suggested to wear chemical-reisitant gloves while using or handling this product.

Body protection : It is suggested to wear safety apron while using or handling this product.

Other skin protection : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection : No specific protective equipment required under normal use conditions.

Section 9. Physical and chemical properties and safety characteristics

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

Appearance

Physical state : Liquid.

Color : Not available.

Odor : Odorless.

Odor threshold : Not available.

pH : 0.9

Melting point/freezing point : Not available.

Boiling point or initial boiling point and boiling range : Not available.

Flash point : [Product does not sustain combustion.]

	Closed cup			Open cup		
Ingredient name	**°C**	**°F**	**Method**	**°C**	**°F**	**Method**
Isopropyl alcohol	11.7	53.1	Pensky-Martens			
Citric acid	100	212				
sodium xylenesulphonate	>93.3	>199.9	Pensky-Martens.			
methanesulphonic acid	189	372.2				

Flammability : Not available.

Lower and upper explosion limit/flammability limit : Not available.

Vapor pressure :

	Vapor Pressure at 20˚C			Vapor pressure at 50˚C		
Ingredient name	**mm Hg**	**kPa**	**Method**	**mm Hg**	**kPa**	**Method**
hydrofluoric acid	783	104.4				
Isopropyl alcohol	33.00268	4.4				
sodium xylenesulphonate	23.6	3.1				
water	17.5	2.3				
methanesulphonic acid	0.00036	0.000048	OECD 104			
Citric acid	0.000000017	0.0000000023				

Relative vapor density : Not available.

Relative density : 1.15

Solubility(ies) :

Section 9. Physical and chemical properties and safety characteristics

Media	Result
cold water hot water	Easily soluble Easily soluble

Solubility in water : Not available.

Partition coefficient: n-octanol/water : Not applicable.

Auto-ignition temperature :

Ingredient name	°C	°F	Method
sodium xylenesulphonate	320.9	609.6	EU A.16
Isopropyl alcohol	456	852.8	
methanesulphonic acid	535	995	DIN 51794
Citric acid	1010	1850	

Decomposition temperature : Not available.

Viscosity : Dynamic (room temperature): Not available.
Kinematic (room temperature): Not available.
Kinematic (40°C (104°F)): Not available.

Particle characteristics

Median particle size : Not applicable.

Section 10. Stability and reactivity

Reactivity : No specific test data related to reactivity available for this product or its ingredients.

Chemical stability : The product is stable.

Possibility of hazardous reactions : May cause an exothermic reaction in presence of alkali.

Conditions to avoid : No specific data.

Incompatible materials : Reactive or incompatible with alkali.

Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
methanesulphonic acid	LD50 Oral	Rat	649 mg/kg	-
Citric acid	LD50 Dermal	Rat	2001 mg/kg	-
	LD50 Oral	Rat	3 g/kg	-
Isopropyl alcohol	LD50 Dermal	Rabbit	12800 mg/kg	-
	LD50 Oral	Rat	5000 mg/kg	-
hydrofluoric acid	LC50 Inhalation Gas.	Rat	638 mg/m³	4 hours
	LC50 Inhalation Vapor	Rat	1100 mg/m³	60 minutes

Irritation/Corrosion

Section 11. Toxicological information

Product/ingredient name	Result	Species	Score	Exposure	Observation
methanesulphonic acid	Eyes - Severe irritant	Rabbit	-	0.1 Ml	-
Citric acid	Eyes - Severe irritant	Rabbit	-	24 hours 750 ug	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 mg	-
	Skin - Moderate irritant	Rabbit	-	0.5 Ml	-
Isopropyl alcohol	Eyes - Moderate irritant	Rabbit	-	10 mg	-
	Eyes - Moderate irritant	Rabbit	-	24 hours 100 mg	-
	Eyes - Severe irritant	Rabbit	-	100 mg	-
	Skin - Mild irritant	Rabbit	-	500 mg	-
hydrofluoric acid	Eyes - Severe irritant	Human	-	50 mg	-
	Skin - Severe irritant	Rat	-	3 minutes 50 %	-

Respiratory or skin sensitization

Not available.

Mutagenicity

Not available.

Carcinogenicity

Not available.

Classification

Product/ingredient name	IARC	NTP	ACGIH
Isopropyl alcohol	3	-	A4

Reproductive toxicity

Not available.

Teratogenicity

Not available.

Specific target organ toxicity (single exposure)

Not available.

Specific target organ toxicity (repeated exposure)

Product/ingredient name	Category	Route of exposure	Target organs
hydrofluoric acid	Category 1	inhalation	-

Aspiration hazard

Not available.

Information on the likely routes of exposure : Routes of entry anticipated: Dermal.
Routes of entry not anticipated: Oral, Inhalation, Eyes.

Potential acute health effects

Eye contact : May cause eye burn

Inhalation : No known significant effects or critical hazards.

Skin contact : May cause skin burns

Ingestion : May cause burns to mouth, throat and stomach.

Symptoms related to the physical, chemical and toxicological characteristics

Section 11. Toxicological information

Eye contact : Adverse symptoms may include the following:
pain
watering
redness

Inhalation : Adverse symptoms may include the following:
respiratory tract irritation
coughing

Skin contact : Adverse symptoms may include the following:
pain or irritation
redness
blistering may occur

Ingestion : Adverse symptoms may include the following:
stomach pains

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

Not available.

General : No known significant effects or critical hazards.

Carcinogenicity : No known significant effects or critical hazards.

Mutagenicity : No known significant effects or critical hazards.

Reproductive toxicity : No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Product/ingredient name	Oral (mg/kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapors) (mg/l)	Inhalation (dusts and mists) (mg/l)
AO2 Gel	2476.2	3880.3	N/A	N/A	N/A
methanesulphonic acid	649	1100	N/A	N/A	N/A
Citric acid	3000	2001	N/A	N/A	N/A
Isopropyl alcohol	5000	12800	N/A	N/A	N/A
hydrofluoric acid	5	N/A	100	N/A	N/A

Section 12. Ecological information

Toxicity

Section 12. Ecological information

Product/ingredient name	Result	Species	Exposure
Citric acid	Acute LC50 160000 µg/l Marine water	Crustaceans - *Carcinus maenas* - Adult	48 hours
	Acute LC50 440 mg/l	Fish	96 hours
Isopropyl alcohol	Acute EC50 7550 mg/l Fresh water	Daphnia - *Daphnia magna* - Neonate	48 hours
	Acute LC50 1400000 µg/l Marine water	Crustaceans - *Crangon crangon*	48 hours
	Acute LC50 4200 mg/l Fresh water	Fish - *Rasbora heteromorpha*	96 hours

Persistence and degradability

Conclusion/Summary : Readily biodegradable according to OECD 301D method

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
AO2 Gel	-	-	Readily

Bioaccumulative potential

Product/ingredient name	$LogP_{ow}$	BCF	Potential
methanesulphonic acid	-2.38	-	Low
Citric acid	-1.8	-	Low
Isopropyl alcohol	0.05	-	Low

Mobility in soil

Soil/Water partition coefficient : Not available.

Other adverse effects : No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

	TDG Classification
UN number	UN1760
UN proper shipping name	Corrosive liquid, n.o.s. (methanesulphonic acid)
Transport hazard class (es)	8 
Packing group	III

Section 14. Transport information

Environmental hazards	No.

Additional information

TDG Classification : Product classified as per the following sections of the Transportation of Dangerous Goods Regulations: 2.40-2.42 (Class 8).

Special precautions for user : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Transport in bulk according to IMO instruments : Not available.

Section 15. Regulatory information

Canadian lists

Canadian NPRI : The following components are listed: isopropyl alcohol

CEPA Toxic substances : None of the components are listed.

Montreal Protocol

Not listed.

Inventory list

Canada : All components are listed or exempted.

United States : Not determined.

Section 16. Other information

History

Date of printing : 2026-06-03

Date of issue/Date of revision : 2026-06-03

Date of previous issue : 2026-02-27

Version : 0.04

Key to abbreviations : ATE = Acute Toxicity Estimate
BCF = Bioconcentration Factor
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
HPR = Hazardous Products Regulations
IATA = International Air Transport Association
IBC = Intermediate Bulk Container
IMDG = International Maritime Dangerous Goods
LogPow = logarithm of the octanol/water partition coefficient
MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
N/A = Not available
SGG = Segregation Group
UN = United Nations

Procedure used to derive the classification

Classification	Justification
SKIN CORROSION - Category 1 SERIOUS EYE DAMAGE - Category 1	On basis of test data On basis of test data

References : Not available.

Indicates information that has changed from previously issued version.

Section 16. Other information

Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.
Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.