

SAFETY DATA SHEET

Section 1. Identification

Product identifier	: Biosolve(TM) AquaMax XL
Material Number	: 57804709
Identified uses	: Cleaning agents
Supplier/Manufacturer	: LANXESS Corporation Product Safety & Regulatory Affairs 111 RIDC Park West Drive Pittsburgh, PA 15275-1112
	For Information: US/Canada (800) LANXESS) International: +1 412 809 1000
In case of emergency	: CHEMTREC (800) 424 9300 International (703) 527 3887 Lanxess Emergency Phone: (866) 673 6350

Section 2. Hazards identification

HAZCOM Standard Status	: This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
Physical state	: Liquid.
Color	: Yellow
Classification of the substance or mixture	: SKIN CORROSION - Category 1 SERIOUS EYE DAMAGE - Category 1
Hazard pictograms	: 
Signal word	: Danger
Hazard statements	: Causes severe skin burns and eye damage.
Hazard Not Otherwise Classified (HNOC)	: None known.
Precautionary statements	
Prevention	: Wear protective gloves/clothing and eye/face protection. Wash hands thoroughly after handling.
Response	: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower. Wash contaminated clothing before reuse. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention immediately.
Storage	: Store locked up.
Disposal	: Dispose of contents and container in accordance with all local, regional, national and international regulations.
Supplemental label elements	: Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials and food and drink.

Section 3. Composition/information on ingredients

Substance/mixture : Mixture

Ingredient name	%	CAS number
Citric Acid	≤10	77-92-9

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

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

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

Section 4. First aid measures

Description of first aid measures

- Eye contact** : Get medical attention immediately. Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. In case of contact with eyes, flush eyes with plenty of water for at least 30 minutes. Chemical burns must be treated promptly by a physician.
- Inhalation** : Get medical attention immediately. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. If not breathing, if breathing is irregular or respiratory arrest occurs, provide artificial respiration, or oxygen by a trained professional, using a pocket type respirator.
- Skin contact** : In case of contact, flush skin with plenty of water for at least 30 minutes. Get medical attention immediately. Immediately remove contaminated clothing and shoes. Wash contaminated skin with soap and water. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Wash clothing before reuse. Clean shoes thoroughly before reuse.
- Ingestion** : Get medical attention immediately. Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Chemical burns must be treated promptly by a physician. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Potential acute health effects

- Eye contact** : Causes serious eye damage.
- Inhalation** : May give off gas, vapor or dust that is very irritating or corrosive to the respiratory system.
- Skin contact** : Causes severe burns.
- Ingestion** : May cause burns to mouth, throat and stomach.

Over-exposure signs/symptoms

- Eye contact** : Corrosive with symptoms of reddening, tearing, swelling, burning and possible permanent damage.
- Inhalation** : No specific data.
- Skin contact** : Corrosive with symptoms of reddening, itching, swelling, burning and possible permanent damage.
- Ingestion** : Corrosive with symptoms of coughing, burning, ulceration, and pain.

Potential chronic health effects

No known significant effects or critical hazards.

Section 4. First aid measures

- Notes to physician** : Treat symptomatically. No specific treatment.
- Protection of first-aiders** : If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. Wash contaminated clothing thoroughly with water before removing it, 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. In case of fire, use water spray (fog), foam or dry chemical.
- 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. Toxic and irritating gases/fumes may be given off during burning or thermal decomposition. Water runoff from fire fighting may be corrosive.

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

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 shall 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 : No action shall 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.

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 : Stop leak if without risk. Move containers from spill area. Approach release from upwind. Wash spillages into an effluent treatment plant or proceed as follows. 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 (see Section 13). 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. Note: see Section 1 for emergency contact information and Section 13 for waste disposal. Prevent entry into sewers, water courses, basements or confined areas.

Section 7. Handling and storage

Precautions for safe handling

Section 7. Handling and storage

- Protective measures** : Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not ingest. Use only with adequate ventilation. 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. Remove contaminated clothing and protective equipment before entering eating areas. Workers should wash hands and face before eating, drinking and smoking. Put on appropriate personal protection equipment. Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed.
- Conditions for safe storage** : Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. 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. Empty containers retain product residue and can be hazardous. Do not reuse container.

Section 8. Exposure controls/personal protection

Occupational exposure limits

Ingredient name	Exposure limits
Citric Acid	None

- 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.

Personal protection

- 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. Ensure that eyewash stations and safety showers are close to the workstation location.
- Respiratory protection** : Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator. A NIOSH approved air purifying respirator with organic vapor cartridges and particulate prefilter can be used to minimize exposure.
- Skin protection** : Permeation resistant clothing and foot protection. Permeation resistant gloves.
- Eye/face protection** : chemical splash goggles and/or face shield. If inhalation hazards exist, a full-face respirator may be required instead. If contact with product is possible, wear safety glasses with side shields.
- Medical Surveillance** : Not available.

Section 9. Physical and chemical properties

- Physical state** : Liquid.
- Color** : Yellow
- Odor** : Odorless.
- Odor threshold** : Not available.
- pH** : 1 to 3
- Boiling point** : 100 °C (1013 hPa)
- Melting point** : 0°C (32°F)
- Flash point** : Closed cup: Not applicable.
- Evaporation rate** : Not available.

Section 9. Physical and chemical properties

Explosion limits	: Not available.
Vapor pressure	: Not available.
Density	: 0.99 to 1.05 g/cm ³
Specific gravity (Relative density)	: 1.03
Solubility in water	: Not available.
Partition coefficient: n-octanol/water	: Not available.
Vapor density	: Not available.
Viscosity	: Not available.
Auto-ignition temperature	: Not available.
Decomposition temperature	: Not available.

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	: Under normal conditions of storage and use, hazardous reactions will not occur.
Conditions to avoid	: No specific data.
Incompatible materials	: Attacks many metals producing extremely flammable hydrogen gas which can form explosive mixtures with air. Reactive or incompatible with the following materials: alkalis
Hazardous decomposition products	: Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on the likely routes of exposure	: Dermal contact. Eye contact.
<u>Potential acute health effects</u>	
Eye contact	: Causes serious eye damage.
Inhalation	: May give off gas, vapor or dust that is very irritating or corrosive to the respiratory system.
Skin contact	: Causes severe burns.
Ingestion	: May cause burns to mouth, throat and stomach.
<u>Symptoms related to the physical, chemical and toxicological characteristics</u>	
Eye contact	: Corrosive with symptoms of reddening, tearing, swelling, burning and possible permanent damage.
Inhalation	: No specific data.
Skin contact	: Corrosive with symptoms of reddening, itching, swelling, burning and possible permanent damage.
Ingestion	: Corrosive with symptoms of coughing, burning, ulceration, and pain.
<u>Potential chronic health effects</u>	
<u>Short term exposure</u>	
Potential immediate effects	: Not available.
<u>Long term exposure</u>	
Potential delayed effects	: Not available.
General	: No known significant effects or critical hazards.
Carcinogenicity	: No known significant effects or critical hazards.

Section 11. Toxicological information

- Mutagenicity** : No known significant effects or critical hazards.
Teratogenicity : No known significant effects or critical hazards.
Developmental effects : No known significant effects or critical hazards.
Fertility effects : No known significant effects or critical hazards.

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure	Test
Citric Acid	LD50 Oral	Rat	11700 mg/kg	-	-
Citric Acid	LD50 Dermal	Rat - Male, Female	>5000 mg/kg Extrapolation according to Regulation (EC) No. 440/2008	-	-

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation	Reversibility
Citric Acid	Skin - Primary dermal irritation index (PDII)	Rabbit	0.3	4 hours	72 hours	-
	Eyes - Cornea opacity	Rabbit	0	-	14 days	-
	Eyes - Iris lesion	Rabbit	0	-	72 hours	-
	Eyes - Edema of the conjunctivae	Rabbit	2.3	-	72 hours	Fully reversible
	Eyes - Redness of the conjunctivae	Rabbit	3	-	72 hours	Fully reversible

Conclusion/Summary

- Skin** : Citric Acid:slightly irritant
Eyes : Citric Acid:Irritant

Mutagenicity

Product/ingredient name	Test	Experiment	Result
Citric Acid	OECD 471 Bacterial Reverse Mutation Test	Experiment: In vitro Subject: Bacteria	Negative
	OECD 473 <i>In vitro</i> Mammalian Chromosomal Aberration Test	Experiment: In vitro Subject: Mammalian-Animal	Negative
	EU B.22 Rodent Dominant Lethal Test	Experiment: In vivo Subject: Mammalian-Animal	Negative
	OECD 475 Mammalian Bone Marrow Chromosomal Aberration Test	Experiment: In vivo Subject: Mammalian-Animal	Negative

Carcinogenicity

Product/ingredient name	Result	Species	Dose	Exposure
Citric Acid	Negative - Oral -	Rat - Male	-	2 years

Product/ingredient name	CAS #	IARC	NTP	OSHA
Citric Acid	77-92-9	Not classified.	Not classified.	Not classified.

Reproductive toxicity

Section 11. Toxicological information

Product/ingredient name	Effects	Species	Dose	Exposure
Citric Acid	NOAEL: Teratogenicity	Rat - Female	Oral: >295 mg/kg bw/day	15 days pre-mating; daily
	NOAEL: Teratogenicity	Rabbit - Female	Oral: >425 mg/kg bw/day	15 days pre-mating; daily

Teratogenicity

Product/ingredient name	Result	Species	Dose	Exposure
Citric Acid	Negative - Unreported	Rat - Female	<241 mg/kg	15 days Gestation; daily

Acute toxicity estimates

Route	ATE value (Acute Toxicity Estimates)
Not available.	

Section 12. Ecological information

Toxicity

Product/ingredient name	Test	Result	Species	Exposure
Citric Acid	-	Acute EC50 >10000 mg/l	Bacteria - Pseudomonas putida	16 hours
	-	Acute EC50 1535 mg/l	Daphnia - Daphnia magna	24 hours
	-	Acute LC50 1516 mg/l Fresh water	Fish - Lepomis macrochirus	96 hours
	-	Chronic NOEC 425 mg/l	Algae - Scenedesmus quadricauda	8 days

Conclusion/Summary : Not available.

Persistence and degradability

Product/ingredient name	Test	Result	Dose	Inoculum
Citric Acid	OECD 301B Ready Biodegradability - CO ₂ Evolution Test	97 % - Readily - 28 days	-	-

Conclusion/Summary : Not available.

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
Citric Acid	-	-	Readily

Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
Citric Acid	-1.64	-	low

Mobility in soil

Soil/water partition coefficient (K_{oc}) : 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. 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. Waste disposal should be in accordance with existing federal state, provincial and or local environmental controls laws.
- RCRA classification** : : If discarded in its purchased form, this product would not be a hazardous waste either by listing or by characteristic. However, under RCRA, it is the responsibility of the product user to determine at the time of disposal, whether a material containing the product or derived from the product should be classified as a hazardous waste. (40 CFR 261.20-24)

Section 14. Transport information

Regulatory information	UN number	Proper shipping name	Classes	PG*	Label	Additional information
DOT Classification	-	-	-	-		Not regulated.
IMDG Class	-	-	-	-		Not regulated.
IATA-DGR Class	-	-	-	-		Not regulated.

PG* : Packing group

RQ : 0 lbs

Section 15. Regulatory information

SARA 311/312 : Immediate (acute) health hazard

SARA Title III Section 302 Extremely Hazardous Substances : None

SARA Title III Section 313 Toxic Chemicals : None

US EPA CERCLA Hazardous Substances (40 CFR 302.4) : None

State regulations

The following chemicals are specifically listed by individual states; other product specific health and safety data in other sections on the SDS may also be applicable for state requirements. For details on your regulatory requirements you should contact the appropriate agency in your state.

<u>Ingredient name</u>	<u>CAS number</u>	<u>State Code</u>	<u>Concentration (%)</u>
Water	7732-18-5		75 - 90
Ethoxylated branched C9-11, C10-rich alcohols	78330-20-8		≤10
Citric Acid	77-92-9		≤10

Massachusetts Substances: MA - S

Massachusetts Extraordinary Hazardous Substances: MA - Extra HS

New Jersey Hazardous Substances: NJ - HS

Pennsylvania RTK Hazardous Substances: PA - RTK HS

Pennsylvania Special Hazardous Substances: PA - Special HS

California Prop. 65

Section 15. Regulatory information

To the best of our knowledge, this product does not contain any of the listed chemicals, which the state of California has found to cause cancer, birth defects or other reproductive harm.

U.S. Toxic Substances Control Act : Listed on the TSCA Inventory.

Section 16. Other information

Hazardous Material Information System	Health	3
	Flammability	0
	Physical hazards	0

0=Insignificant 1=Slight 2=Moderate 3=High 4=Extreme
*=Chronic

The customer is responsible for determining the PPE code for this material. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

National Fire Protection Association (U.S.A.) :



0= Minimal 1=Slight 2=Moderate 3=Serious 4=Severe

Our method of hazard communication is comprised of Product Labels and Safety Data Sheets. HMIS and NFPA ratings are provided as a customer service.

Reprinted with permission from NFPA 704-2001, Identification of the Hazards of Materials for Emergency Response Copyright ©1997, National Fire Protection Association, Quincy, MA 02269. This reprinted material is not the complete and official position of the National Fire Protection Association, on the referenced subject which is represented only by the standard in its entirety.

Date of issue : 04-03-2017

Date of previous issue : 01-17-2017

Version : 1.01

Product Safety and Regulatory Affairs

Indicates information that has changed from previously issued version.

Notice to reader

This information is furnished without warranty, express or implied. This information is believed to be accurate to the best knowledge of LANXESS Corporation. The information in this SDS relates only to the specific material designated herein. LANXESS Corporation assumes no legal responsibility for use of or reliance upon the information in this SDS.