



Xanthan Gum Safety Data Sheet

ID: C1-210

*** Section 1 - Chemical Product and Company Identification ***

Part Number: Food, Feed, Technical, and Industrial Grade
Chemical Name: Xanthan Gum
Chemical Family: High Molecular Weight Polysaccharide
Product Use: Commercial Use

RESTRICTIONS on USE

NOT TO BE USED AS A PESTICIDE. THIS PRODUCT IS NOT TO BE USED IN VIOLATION OF ANY PATENTS. CHEM ONE LTD. DISCLAIMS ANY AND ALL WARRANTIES, EITHER EXPRESSED OR IMPLIED, INCLUDING THE WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR APPLICATION. IN NO EVENT SHALL CHEM ONE LTD. OR ITS SUPPLIERS BE LIABLE FOR ANY DAMAGES WHATSOEVER INCLUDING DIRECT, INDIRECT, INCIDENTAL, CONSEQUENTIAL, LOSS OF BUSINESS PROFITS OR SPECIAL DAMAGES, EVEN IF CHEM ONE LTD. OR ITS SUPPLIERS HAVE BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. SOME STATES DO NOT ALLOW THE EXCLUSION OF LIMITATION OF LIABILITY FOR CONSEQUENTIAL OR INCIDENTAL DAMAGES SO THE FOREGOING LIMITATION MAY NOT APPLY.

Distributor Information
Chemistry Connection
253 Sturgis Road
Conway, Arkansas 72034

Phone: (501) 470-9689

Emergency # Chemtrec: (800) 424-9300

NOTE: Emergency telephone numbers are to be used only in the event of chemical emergencies involving a spill, leak, fire, exposure, or accident involving chemicals. All non-emergency questions should be directed to customer service.

*** Section 2 - Hazards Identification ***

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Classification of the substance or mixture: Not a hazardous substance or mixture.

Label elements, including precautionary statements: Not a hazardous substance or mixture.

Hazards not otherwise classified (HNOC) or not covered by GHS: MAY FORM COMBUSTIBLE DUST CONCENTRATIONS IN AIR (DURING PROCESSING). MAY CAUSE EYE AND RESPIRATORY TRACT IRRITATION.

*** Section 3 - Composition / Information on Ingredients ***

CAS #	Component	Percent
11138-66-2	Xanthan Gum	> 91.0-100%

Synonyms: Xanthan

*** Section 4 - First Aid Measures ***

Emergency Overview

Xanthan Gum is free-flowing, white to cream-colored powder with a slight organic odor. Dusts from Xanthan Gum cause irritation of respiratory system and eyes. Xanthan Gum can burn if strongly heated. Xanthan Gum poses a serious dust explosion hazard. Use methods suitable for surrounding fire. Firefighters should wear full protective equipment when fighting a fire involving this product.

Hazard Statements

WARNING! **MAY FORM COMBUSTIBLE DUST CONCENTRATIONS IN AIR (DURING PROCESSING).** MAY CAUSE EYE AND RESPIRATORY TRACT IRRITATION. Prolonged skin contact may cause irritation. Do not breath dusts. Do not allow contact with eyes, skin, or clothing. Avoid accumulation of dusts. Wet material is very slippery and poses slip hazard. Keep container closed. Use only with adequate ventilation. Wash thoroughly after handling.

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*** Section 4 - First Aid Measures Continued ***

Potential Health Effects: Eyes

Dusts may cause irritation to the eyes, with symptoms that include redness, tearing, and pain.

Potential Health Effects: Skin

Currently, there are no data on the symptoms of skin exposure to Xanthan Gum. May cause skin irritation if contact is prolonged.

Potential Health Effects: Ingestion

Ingestion of low levels of Xanthan Gum is not expected to cause adverse reaction. Large oral doses may cause abdominal irritation, nausea, and vomiting.

Potential Health Effects: Inhalation

Dusts may cause mild to moderate irritation of the nose and throat. Overexposure could cause coughing, sneezing, and labored breathing.

First Aid: Eyes

Immediately flush the contaminated eye with plenty of water for 15 minutes. Get medical attention if symptoms of pain, swelling, or tearing exist after flushing the eyes.

First Aid: Skin

For skin contact, immediately wash extremely thoroughly with soap and water. Get medical attention if irritation develops or persists.

First Aid: Ingestion

Have victim rinse mouth thoroughly with water. DO NOT INDUCE VOMITING. Immediately give large amounts of water. If vomiting occurs naturally, rinse mouth and repeat administration of water. Obtain medical advice immediately. Never give anything by mouth to a victim who is unconscious or having convulsions.

First Aid: Inhalation

Remove source of contamination or move victim to fresh air. Apply artificial respiration if victim is not breathing. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Administer oxygen if breathing is difficult. Get immediate medical attention.

First Aid: Notes to Physician

There is no specific antidote. Care is symptomatic and supportive.

*** Section 5 - Fire Fighting Measures ***

General Fire Hazards

Xanthan Gum can burn if strongly heated. Dusts from Xanthan Gum may form explosive mixtures with air. During a fire, irritating/toxic gases and fumes may be generated, including carbon oxides. Under certain conditions, a dust cloud of Xanthan Gum may explode when ignited by a spark or flame. Refer to NFPA 654, *Standard for the Prevention of Fire and Dust Explosions from the Manufacturing, Processing, and Handling of Combustible Particulate Solids*, for comprehensive guidance.

Hazardous Combustion Products

Carbon monoxide and carbon dioxide are normal products of combustion.

Extinguishing Media

Carbon dioxide, dry chemical powder, alcohol foam, polymer foam, water spray or fog.

Fire Fighting Equipment/Instructions

Firefighters should wear full protective clothing including self contained breathing apparatus.

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*** Section 6 - Accidental Release Measures ***

Containment Procedures

Stop the flow of material, if this can be done without risk. Contain the discharged material. If sweeping of a contaminated area is necessary use a dust suppressant agent, which does not react with product. Spilled material that becomes wet will be very slippery.

Clean-Up Procedures

Wear appropriate protective equipment and clothing during clean-up. Shovel the material into waste container. Thoroughly wash the area after a spill or leak clean-up. Prevent spill rinsate from contamination of storm drains, sewers, soil or groundwater. Use copious amounts of water to decontaminate spill areas after clean-up to prevent creating slip hazard.

Evacuation Procedures

Evacuate the area promptly and keep upwind of the spilled material. Isolate the spill area to prevent people from entering. Keep materials which burn away from spilled material. In case of large spills, follow all facility emergency response procedures.

Special Procedures

Remove soiled clothing and launder before reuse. Avoid all skin contact with the spilled material. Have emergency equipment readily available.

*** Section 7 - Handling and Storage ***

Handling Procedures

All employees who handle this material should be trained to handle it safely. Do not breathe dust. Avoid all contact with skin and eyes. Use this product only with adequate ventilation. Wash thoroughly after handling. Areas in which this compound is used should be wiped down periodically so that this substance is not allowed to accumulate. Dry powders can build static electricity charges when subjected to the friction of transfer and mixing operations. Provide adequate precautions, such as electrical grounding and bonding, or inert atmospheres. Be aware that spilled material that becomes wet will be very slippery and create a serious slip hazard.

Storage Procedures

Keep container tightly closed when not in use. Store containers in a cool, dry location, away from direct sunlight, sources of intense heat, or where freezing is possible. Material should be stored in secondary containers or in a diked area, as appropriate. Store containers away from incompatible chemicals (see Section 10, Stability and Reactivity). Storage areas should be made of fire-resistant materials. Post warning and "NO SMOKING" signs in storage and use areas, as appropriate. Refer to NFPA 654, *Prevention of Fire and Dust Explosions from the Manufacturing, Processing and Handling of Combustible Particulate Solids* for additional information on storage. Containers of this material should be separated from oxygen, or other oxidizers, by a minimum distance of 20 ft., or by a barrier of non-combustible material at least 5 ft. high, having a fire-resistance rating of at least 0.5 hours. Additional information can be found the OSHA Safety and Health Information Bulletin: *Combustible Dust in Industry: Preventing and Mitigating the Effects of Fire and Explosions*. Use only appropriately classified electrical equipment and powered industrial trucks. Use corrosion-resistant structural materials, lighting, and ventilation systems in the storage area. Floors should be sealed to prevent absorption of this material. Inspect all incoming containers before storage, to ensure containers are properly labeled and not damaged. Have appropriate extinguishing equipment in the storage area (i.e., sprinkler system, portable fire extinguishers). Good housekeeping is very important to prevent accumulations of dust. Dry sweeping is not recommended. Pre-wet the material or use an explosion-proof vacuum equipped with high efficiency filter(s) and take great care against slip hazard. Use only conductive equipment for handling this material (e.g. metal conveyors and piping) and keep all components grounded. Ground clips must contact bare metal. Do not transfer in storage area unless it is segregated by fire-resistant construction. Empty containers may contain residual particulates; therefore, empty containers should be handled with care. Never store food, feed, or drinking water in containers which held this product. Keep this material away from food, drink and animal feed. Do not store this material in open or unlabeled containers. Limit quantity of material stored. Wipe down area of use periodically to avoid the accumulation of dusts.

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*** Section 8 - Exposure Controls / Personal Protection ***

Exposure Guidelines

A: General Product Information

No exposure guidelines have been established. Use a non-sparking, grounded, explosion-proof ventilation system separate from other exhaust ventilation systems. Ensure that dust-handling systems (such as exhaust ducts, dust collectors, vessels, and processing equipment) are designed in a manner to prevent the escape of dust into the work area (i.e., there is no leakage from the equipment).

B: Component Exposure Limits

ACGIH, OSHA, and NIOSH have not developed exposure limits for any of this product's components.

The exposure limits given are for Particulates Not Otherwise Classified (PNOC).

OSHA: 15 mg/m³ TWA (Total dust)

5 mg/m³ TWA (Respirable fraction)

DFG MAKs 4 mg/m³ TWA (Inhalable fraction)

1.5 mg/m³ TWA (Respirable fraction)

Engineering Controls

Use engineering methods to control hazardous conditions. This includes exhaust ventilation directly to the outside and using a corrosion-resistant ventilation system separate from other exhaust ventilation systems.

PERSONAL PROTECTIVE EQUIPMENT

The following information on appropriate Personal Protective Equipment is provided to assist employers in complying with OSHA regulations found in 29 CFR Subpart I (beginning at 1910.132). Please reference applicable regulations and standards for relevant details.

Personal Protective Equipment: Eyes/Face

Wear chemical safety goggles. If necessary, refer to U.S. OSHA 29 CFR 1910.133.

Personal Protective Equipment: Skin

Use impervious gloves. Gloves should be tested to determine their suitability for prolonged contact with this material. If necessary, refer to U.S. OSHA 29 CFR 1910.138.

Personal Protective Equipment: Respiratory

None required where adequate ventilation conditions exist. If airborne concentration is high, use an appropriate respirator or dust mask. If airborne concentrations are above the applicable exposure limits, use NIOSH-approved respiratory protection. If respiratory protection is needed, use only protection authorized in the U.S. Federal OSHA Standard (29 CFR 1910.134), applicable U.S. State regulations. Oxygen levels below 19.5% are considered IDLH by OSHA. In such atmospheres, use of a full-facepiece pressure/demand SCBA or a full facepiece, supplied air respirator with auxiliary self-contained air supply is required under OSHA's Respiratory Protection Standard (1910.134-1998). Personal

Protective Equipment: General

Have an eyewash fountain and safety shower available in the work area. Use good hygiene practices when handling this material including changing and laundering work clothing after use. Wash hands thoroughly after handling material. Do not eat, drink, or smoke in work areas.

Protective Clothing Pictograms:



Splash Goggles



Gloves



Protective Apron



Dust Respirator

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*** Section 9 - Physical & Chemical Properties ***

Physical Properties: Additional Information

The data provided in this section are to be used for product safety handling purposes. Please refer to Product Data Sheets, Certificates of Conformity or Certificates of Analysis for chemical and physical data for determinations of quality and for formulation purposes.

Physical State:	Powder.	Odor	Slight organic.
Vapor Pressure:	Not applicable.	pH:	6.0-8.0 (1% solution)
Boiling Point:	Not applicable.	Vapor Density:	Not applicable.
Solubility (H₂O):	Freely soluble in water.	Melting Point:	Not available.
Freezing Point:	Not applicable.	Specific Gravity:	Not available.
Softening Point:	Not available.	Particle Size:	100% through 60 mesh; 95% at 80 mesh
Viscosity:	Not applicable.	Evaporation Rate:	Not applicable.
Percent Volatile:	0	Bulk Density:	650-850 kg/m ³
Critical Temperature:	Not applicable.	Molecular Weight:	10 ⁶
Flash Point:	Not determined.	Chemical	(C35H49O29)n
Upper Flammable Limit (UEL):	Not determined.	Formula: Method	Not applicable
Flammability		Used: Lower	
Classification:	Not applicable	Flammable Limit (LEL):	Not determined. > 200 deg C (> 392 deg F)
Minimum Ignition Temperature:	620 deg C (1148 deg F) (cloud); 600 deg C (1112 deg F) (cloud); layer melts (22,23)	Auto Ignition:	Not available.
		Rate of Burning:	

*** Section 10 - Chemical Stability & Reactivity Information ***

Chemical Stability

Stable under normal conditions.

Chemical Stability: Conditions to Avoid

Heat, moisture and incompatible materials.

Incompatibility

Xanthan Gum is incompatible with strong oxidizing agents.

Hazardous Decomposition

Carbon monoxide and carbon dioxide are normal products of combustion.

Hazardous Polymerization

Hazardous polymerization will not occur.

*** Section 11 - Toxicological Information ***

Acute and Chronic Toxicity

A: General Product Information

Breathing dusts of Xanthan Gum may be irritating to respiratory system and mucous membranes. Dust may be irritating to the eyes. No information is available on the symptoms of skin exposure; prolonged contact may be irritating.

B: Component Analysis - LD₅₀/LC₅₀

Xanthan Gum (65-85-0)

LD₅₀ (Oral-Rat) 45,000 mg/kg

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***** Section 11 - Toxicological Information Continued *****

Carcinogenicity

A: General Product Information

No information identified.

B: Component Carcinogenicity

Xanthan Gum is not listed by ACGIH, IARC, OSHA, NIOSH, or NTP.

Epidemiology

No information available.

Neurotoxicity

Has not been identified.

Mutagenicity

No data available.

Teratogenicity

No data available.

Other Toxicological Information

None known.

***** Section 12 - Ecological Information *****

Ecotoxicity

A: General Product Information

Xanthan Gum biodegrades quite rapidly: > 98% after 2 days. The biochemical oxygen demand within 5 days (BOD5) = 250 mg O₂/g

B: Aquatic Toxicity

No data are currently available for Xanthan Gum.

Environmental Fate

Mobility: Completely soluble. Terrestrial Fate: No information available. Aquatic Fate: No information currently available. Atmospheric Fate No information currently available. Bioaccumulation: No information available.

***** Section 13 - Disposal Considerations *****

US EPA Waste Number & Descriptions

A: General Product Information

Wastes should be tested prior to disposal to determine classification.

B: Component Waste Numbers

Not applicable.

Disposal Instructions

All wastes must be handled in accordance with local, state and federal regulations or with. This product, if unaltered by use, may be disposed of by treatment at a permitted facility or as advised by your local hazardous waste regulatory authority. Disposal by controlled incineration or secure landfill may be acceptable.

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*** Section 14 - Transportation Information ***
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NOTE: The shipping classification information in this section (Section 14) is meant as a guide to the overall classification of the product. However, transportation classifications may be subject to change with changes in package size. Consult shipper requirements under I.M.O., I.C.A.O. (I.A.T.A.) and 49 CFR to assure regulatory compliance.

US DOT Information

- Shipping Name:** Not applicable.
- Hazard Class:** Not applicable
- UN/NA #:** Not applicable
- Packing Group:** Not applicable
- Required Label(s):** Not applicable
- RQ Quantity:** Not applicable

56th Edition International Air Transport Association (IATA):

For Shipments by Air transport: Not considered hazardous.

37-14 International Maritime Organization (I.M.O.) Classification

I.M.O. Classification: Not considered hazardous under IMDG/ I.M.O. regulations.

*** Section 15 - Regulatory Information ***
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US Federal Regulations

A: General Product Information

Xanthan Gum is approved by the FDA as a Food Additive.

B: Component Analysis

Xanthan Gum is not listed under SARA Section 302 (40 CFR 355 Appendix A), SARA Section 313 (40 CFR 372.65), or CERCLA (40 CFR 302.4).

SARA 302 (EHS TPQ) There are no specific Threshold Planning Quantities for Xanthan Gum. The default Federal MSDS submission and inventory requirement filing threshold of 10,000 lbs. (4,540 kg) therefore applies, per 40 CFR 370.20.

C: Sara 311/312 Tier II Hazard Ratings:

Component	CAS #	Fire Hazard	Reactivity Hazard	Pressure Hazard	Immediate Health Hazard	Chronic Health Hazard
Xanthan Gum	11138-66-2	No	No	No	Yes	No

State Regulations

A: General Product Information

Other state regulations may apply.

B: Component Analysis – State

Component	CAS #	CA	FL	MA	MN	NJ	PA
Xanthan Gum	11138-66-2	No	No	No	No	No	No

Other Regulations

A: General Product Information

No additional information.

B: Component Analysis - Inventory

Component	CAS #	TSCA	DSL	EINECS
Xanthan Gum	11138-66-2	Yes	Yes	Yes

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***** Section 15 - Regulatory Information Continued *****

C: Component Analysis - WHMIS IDL

The following components are identified under the Canadian Hazardous Products Act Ingredient Disclosure List:

Component	CAS #	Minimum Concentration
Xanthan Gum	11138-66-2	Not listed.

ANSI Labeling (Z129.1):

WARNING! MAY FORM COMBUSTIBLE DUST CONCENTRATIONS IN AIR (DURING PROCESSING). MAY CAUSES EYE RESPIRATORY TRACT IRRITATION. PROLONGED SKIN CONTACT MAY CAUSE IRRITATION. Do not taste or swallow. Do not get on skin or in eyes. Avoid breathing dusts or particulates. Keep container closed. Use only with adequate ventilation. Keep away from heat or flame. Keep container closed and grounded. Prevent dust accumulations to minimize explosion hazard. Wash thoroughly after handling. Keep from contact with clothing. Wear gloves, goggles, facemasks, suitable body protection, and NIOSH-approved respiratory protection, as appropriate. **FIRST-AID:** In case of contact, immediately flush skin or eyes with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. If inhaled, remove to fresh air. If ingested, do not induce vomiting. Get medical attention. **IN CASE OF FIRE:** Use water fog, dry chemical, CO₂, or "alcohol" foam. **IN CASE OF SPILL:** Absorb spill with inert material. Spills may be very slippery if wetted. Place residue in suitable container. Consult Material Safety Data Sheet for additional information.

***** Section 16 - Other Information *****

Other Information

Chemistry Connection shall not be responsible for the use of any information, product, method, or apparatus herein presented ("Information"), and you must make your own determination as to its suitability and completeness for your own use, for the protection of the environment, and for health and safety purposes. You assume the entire risk of relying on this Information. In no event shall Chemistry Connection be responsible for damages of any nature whatsoever resulting from the use of this product or products, or reliance upon this Information. By providing this Information, Chemistry Connection neither can nor intends to control the method or manner by which you use, handle, store, or transport Chemistry Connection products. If any materials are mentioned that are not Chemistry Connection products, appropriate industrial hygiene and other safety precautions recommended by their manufacturers should be observed. Chemistry Connection makes no representations or warranties, either express or implied of merchantability, fitness for a particular purpose or of any other nature regarding this information, and nothing herein waives any of Chemistry Connection's conditions of sale. This information could include technical inaccuracies or typographical errors. Chemistry Connection may make improvements and/or changes in the product (s) and/or the program (s) described in this information at any time.

Key/Legend

EPA = Environmental Protection Agency; TSCA = Toxic Substance Control Act; ACGIH = American Conference of Governmental Industrial Hygienists; IARC = International Agency for Research on Cancer; NIOSH = National Institute for Occupational Safety and Health; NTP = National Toxicology Program; OSHA = Occupational Safety and Health; NA = Not available or not applicable g = grams; kg = kilograms GRAS = Generally regarded as safe, BCF = Bioconcentration Factor