**Safety Data Sheet**

**Material Name: Xanthan Gum**

**ID: C1-210**

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**Section 1 - Identification**

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

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**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.

**Supplier Information**

Chem One Ltd.  
Phone: (713) 896-9966  
Fax: (713) 896-7540

14140 Westfair East Drive  
Houston, Texas 77041-1104

**Emergency # (800) 424-9300 or +1 (703) 527-3887**

**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.

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**Section 2 – Hazard(s) Identification**

**Hazard Classes**

**Combustible Dust**

**Signal Word:** Warning

**Pictograms:** None

**Hazard Statements**

**PHYSICAL HAZARDS:** May form combustible dust concentrations in air

**HEALTH HAZARDS:** None

**ENVIRONMENTAL HAZARDS:** None

**PRECAUTIONARY STATEMENTS:**

P102: Keep out of reach of children  
P202: Do not handle until all safety precautions have been read and understood

**RESPONSE STATEMENTS:** None.

**STORAGE STATEMENTS:** None
**Section 3 - Composition / Information on Ingredients**

<table>
<thead>
<tr>
<th>CAS #</th>
<th>Component</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>11138-66-2</td>
<td>Xanthan Gum</td>
<td>&gt; 91.0-100%</td>
</tr>
</tbody>
</table>

**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.

**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.

NFPA Ratings: Health Hazard: 1  Fire Hazard: 1  Physical Hazard: 0
Hazard Scale:  0 = Minimal  1 = Slight  2 = Moderate  3 = Serious  4 = Severe  * = Chronic hazard

* * * 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 in 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. 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.

** 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/m$^3$ TWA (Total dust)
- 5 mg/m$^3$ TWA (Respirable fraction)

**DFG MAKs**

- 4 mg/m$^3$ TWA (Inhalable fraction)
- 1.5 mg/m$^3$ 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).

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

** 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.

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<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Odor</td>
<td>Slight organic</td>
</tr>
<tr>
<td>pH</td>
<td>6.0-8.0 (1% solution)</td>
</tr>
<tr>
<td>Vapor Density</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Melting Point</td>
<td>Not available</td>
</tr>
<tr>
<td>Specific Gravity</td>
<td>Not available</td>
</tr>
<tr>
<td>Particle Size</td>
<td>100% through 60 mesh; 95% at 80 mesh</td>
</tr>
<tr>
<td>Evaporation Rate</td>
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<tr>
<td>Bulk Density</td>
<td>650-850 kg/m³</td>
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<tr>
<td>Molecular Weight</td>
<td>10⁶</td>
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<tr>
<td>Chemical Formula</td>
<td>(C₃₅H₄₉O₂₉)n</td>
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<tr>
<td>Decomposition temperature</td>
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<tr>
<td>Lower Flammable Limit (UEL)</td>
<td>Not determined</td>
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<tr>
<td>Auto Ignition temperature</td>
<td>Not available</td>
</tr>
<tr>
<td>Rate of Burning</td>
<td>Not available</td>
</tr>
</tbody>
</table>

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

Chemical Stability
Stable under normal conditions.

Chemical Stability: Conditions to Avoid
Heat, moisture and incompatible materials.
**Material Name: Xanthan Gum**

**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)**
  - LD$_{50}$ (Oral-Rat) 45,000 mg/kg

#### 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.

**Section 14 - Transportation Information**

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

International Air Transport Association (IATA):
For Shipments by Air transport: Not considered hazardous.

International Maritime Organization (I.M.O.) Classification
I.M.O. Classification: Not considered hazardous under IMDG/ I.M.O. regulations.

**Section 15 - Regulatory Information**

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:

<table>
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<tr>
<th>Component</th>
<th>CAS #</th>
<th>Fire Hazard</th>
<th>Reactivity Hazard</th>
<th>Pressure Hazard</th>
<th>Immediate Health Hazard</th>
<th>Chronic Health Hazard</th>
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<tr>
<td>Xanthan Gum</td>
<td>11138-66-2</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
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</table>

State Regulations
A: General Product Information
Other state regulations may apply.
B: Component Analysis – State

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<th>Component</th>
<th>CAS #</th>
<th>CA</th>
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<td>No</td>
<td>No</td>
<td>No</td>
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Other Regulations

A: General Product Information
No additional information.

B: Component Analysis - Inventory

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS #</th>
<th>TSCA</th>
<th>DSL</th>
<th>EINECS</th>
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<tbody>
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<td>11138-66-2</td>
<td>Yes Active</td>
<td>Yes</td>
<td>Yes</td>
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</table>

C: Component Analysis - WHMIS IDL

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

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS #</th>
<th>Minimum Concentration</th>
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<tbody>
<tr>
<td>Xanthan Gum</td>
<td>11138-66-2</td>
<td>Not listed.</td>
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</table>

*** Section 16 - Other Information ***

Other Information

Chem One Ltd. ("Chem One") 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 Chem One 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, Chem One neither can nor intends to control the method or manner by which you use, handle, store, or transport Chem One products. If any materials are mentioned that are not Chem One products, appropriate industrial hygiene and other safety precautions recommended by their manufacturers should be observed. Chem One 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 Chem One's conditions of sale. This information could include technical inaccuracies or typographical errors. Chem One may make improvements and/or changes in the product(s) and/or the program(s) described in this information at any time. If you have any questions, please contact us at Tel. 713-896-9966 or E-mail us at Safety@chemone.com.

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

Revision log: Created 3/18/02 7:15 PM HDF
09/30/03: 11:50 AM HDF General review and up-date of entire MSDS. Up-date of HMIS categories. Up-date of Section 8. Up-date of Section 14.
06/22/05 4:35 PM SEP Update IATA Section 14
10/23/07 2:37 pm, SEP Updated DOT & IATA Section 14
10/15/08 10:54 AM DLY Changed Chem One Physical Address, Section 1
06/17/10 SEP Update IATA and air/dust explosion hazard
02/09/2015 GHS Revision all sections
This is the end of SDS # C1-209
Revised By:
SJC Compliance Education, Inc. 16516 El Camino Real Suite 417, Houston TX 77062

09/27/2018 Melanie Koch added NFPA section no other changes were made.
06/17/2019 Revised Sections 2, 4 and 9, removed ANSI Labeling.