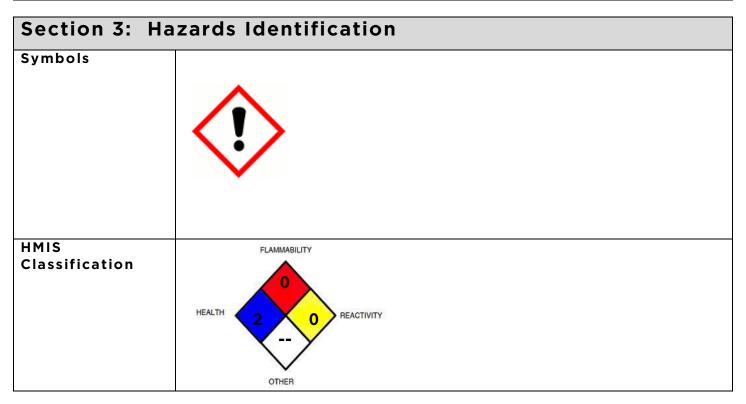


Safety Data Sheet

| Section 1: Product & Company Identification | | |
|---|--|--|
| Product Name: | Curcumin | |
| Product #: | C-2275 | |
| Synonyms: | Indian saffron; Turmeric yellow | |
| Supplier: | AG Scientific Holdings, LLC 9950 Scripps Lake Drive, Suite 104 San Diego, CA 92131 Tele# + 858-452-9925 | |
| Emergency Tele#: | ChemTel, Tele# in USA 1-800-255-3924, International 1-813-248-0585 | |

| Section 2: Composition / Information on Ingredients | | | |
|---|----------|-----------|---------------|
| Component | CAS # | EC # | % Composition |
| Curcumin | 458-37-7 | 207-280-5 | |





| NFPA | FLAMMABILITY |
|----------------|--------------------------------|
| Classification | HEALTH 2 0 REACTIVITY OTHER |

Section 4: First Aid Measures

| General Overview: | May cause anemia, cough, CNS depression, drowsiness, headache, heart damage, lassitude (weakness, exhaustion), liver damage, narcosis, reproductive effects, teratogenic effects. No further relevant information available. |
|----------------------|---|
| Inhalation: | In case of unconsciousness place patient stably in side position for transportation. |
| Skin: | Immediately wash with water and soap and rinse thoroughly |
| Eyes: | Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor. |
| Ingestion: | If symptoms persist consult doctor. |
| | See section 11 for more detailed information on health effects & symptoms. |

SECTION 5: Fire Fighting Measures

| Flammability of | No data available |
|-----------------|--|
| the product: | |
| Extinguishing | Use fire fighting measures that suit the environment. A solid water stream |
| Media: | may be inefficient. |
| Hazardous | No data available |
| thermal | |
| (de)composition | |
| products: | |
| Special Fire | No special measures required. |
| Fighting | |
| Procedures: | |
| Flash Point: | No data available |

| Section 6: A | ccidental Release Measures |
|---------------|---|
| Personal | Do not allow to enter sewers/surface or ground water. |
| Precautions: | |
| Environmental | No data available |
| Precautions: | |



| Methods for | Ensure adequate ventilation. |
|-------------|------------------------------|
| Clean-up: | |

SECTION 7: Handling & Storage Storage: Recommended storage temperature: 2 - 8°C Handling: No special precautions are necessary if used correctly. Avoid breathing dust (fume (gas (mint (vapers (sprav. Avoid prelenged or repeated avoid prelenged

dust/fume/gas/mist/vapors/spray. Avoid prolonged or repeated exposure. Keep away from sources of ignition. Take precautionary measures against static discharge.

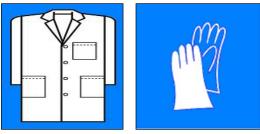
SECTION 8: Exposure controls / Personal Protection

Respiratory Protection:



In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.

Skin and Body:



Lab coat. Protective gloves.

Eyes:



| | \smile | | | |
|--------------------------------------|--------------------|--------------|--|--|
| | Tightly sealed gog | ggles | | |
| Ventilation/Engineering Measures: | Ensure adequate | ventilation. | | |



| Hygiene: | Handle in accordance with good industrial hygiene and safety practice. |
|----------|--|
| Other: | N/A |

SECTION 9: Physical and Chemical Properties

| Appearance & | Solid |
|--------------------------|-------------------|
| Odor: | |
| Formula | $C_{21}H_{20}O_6$ |
| Molecular Wt. | 368.4 |
| Melting Pt. | 179 - 182°C |
| Boiling Pt. | No data available |
| Density: | No data available |
| Vapor Pressure: | No data available |
| Evaporation Rate: | No data available |
| Vapor Density: | No data available |
| Solubility: | Acetone |
| Flash Point: | No data available |
| Autoignition | No data available |
| Temp: | |

| SECTION 10: Stability and Reactivity | | |
|--------------------------------------|--|--|
| Stability: | Stable under recommended storage conditions. | |
| Hazardous | Carbon dioxide, carbon monoxide | |
| decomposition | | |
| products: | | |
| Materials to Avoid: | Strong oxidizing agents | |
| Conditions to avoid: | No data available | |

| SECTION 11: Toxicological Information | | |
|---|---|--|
| RTECS#: | MI5230000 | |
| ACUTE Toxicity: | Oral LD50 = >2 g/kg (rat) Oral TDLO = 50 mg/kg (mouse) Intraperitoneal TDLO = 40 mg/kg (rat) Intraperitoneal LD50 = 1,500 mg/kg (mouse) | |
| CHRONIC Toxicity: | N/A | |
| Chronic Exposure: Carcinogen: Mutagen: Teratogen: Reproductive: | IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible, or confirmed human carcinogen by IARC. AGGIH: No component of this product present at levels greater than or equal to 0.1% is identified as probable, potential human carcinogen by ACGIH. | |



| NTP: No component of this product present at levels greater than or |
|--|
| equal to 0.1% is identified as known or anticipated human carcinogen by |
| NTP. |
| OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as known or potential human carcinogen by OSHA. |
| EPA: No classification on carcinogenic data is available from EPA |

| SECTION 12: Ecological Information | | |
|------------------------------------|--|--|
| Ecotoxicity: | Water hazard class 1 (Self-assessment): slightly hazardous for water. | |
| | Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system. | |
| Mobility: | No data available | |
| Persistence and | No data available | |
| degradability: | | |
| Bioaccumulative | No data available | |
| potential: | | |
| Other adverse | No data available | |

| effects: | |
|-----------------|--|
| Corrosivity | No data available |
| Characteristic: | |
| General Notes: | To the best of our knowledge, the chemical, physical and toxicological |
| | properties have not been thoroughly investigated. |

| SECTION 13: Disposal Considerations | |
|-------------------------------------|---|
| Residue Waste or Unused product: | Must not be disposed of together with household garbage. Do not allow product to reach sewage system. |
| Contaminated Packaging: | Disposal must be made according to official regulations. |

| SECTION 14: Transportation Information | | |
|--|---------------|--|
| UN ID#: | N/A | |
| ADR / RID (LAND): | Not regulated | |
| DOT regulations: | Not regulated | |
| IMDG/IMO (SEA): | Not regulated | |
| IATA/DGR (AIR): | Not regulated | |
| Special Provisions: | N/A | |

| SECTION 15: Regulatory Information | |
|------------------------------------|---|
| Health Phrases: | Warning! H315 Causes skin irritation. H319 Causes serious eye irritation. H335 May cause respiratory irritation. |



| Risk Phrases: | P261 Avoid breathing dust/fume/gas/mist/vapors/spray |
|-----------------|---|
| | P264 Wash thoroughly after handling. |
| | P271 Use only outdoors or in a well-ventilated area. |
| | P280 Wear protective gloves / eye protection / face protection. |
| Safety Phrases: | P302+P352 If on skin: Wash with plenty of water. |
| - | P304+P340 IF INHALED: Remove person to fresh air and keep |
| | comfortable for breathing. |
| | P305+P351+P338 If in eyes: Rinse cautiously with water for several |
| | minutes. Remove contact lenses, if present and easy to do. Continue |
| | rinsing. |
| | P312 Call a poison center/doctor if you feel unwell. |
| | P321 Specific treatment (see on this label). |
| | P362+P364 Take off contaminated clothing and wash it before reuse. |
| | P332+P313 If skin irritation occurs: Get medical advice/attention. |
| | P337+P313 If eye irritation persists: Get medical advice/attention. |
| | P403+P233 Store in a well-ventilated place. Keep container tightly closed. |
| | P405 Store locked up. |
| | P501 Dispose of contents/container in accordance with local/regional/ |
| | national/international regulations. |
| EU Regulations: | N/A |
| US Regulations: | TSCA: Listed |
| | California Proposition 65: No products were found |
| U.S. Federal | SARA 302/304 emergency planning and notification: No products were |
| Regulations: | found. |
| | SARA 311/312 MSDS distribution-chemical inventory-hazard |
| | identification: No products were found. |
| | SARA 313 toxic chemicals notification and release reporting: No products |
| | were found. |
| | Clean Water Act (CWA) 307: No products were found. |
| | Clean Water Act (CWA) 311: No products were found. |
| | Clean Air Act (CAA) 112 accidental release prevention: No products were |
| | found. |
| | Clean Air Act (CAA) 112 regulated flammable substances: No products were found. |
| | Clean Air Act (CAA) 112 regulated toxic substances: No products were |
| | found. |
| | OSHA: No products were found. |
| WHMIS (Canada): | N/A |
| | |

SECTION 16: Other Information

LIABILITY STATEMENT: The above information is believed to be correct but does not purport to be allinclusive and shall be used only as a guide. AG Scientific shall not be held liable for any damages resulting from handling or from contact with the above product. AG Scientific products are for research purposes only. Not for human use or consumption.