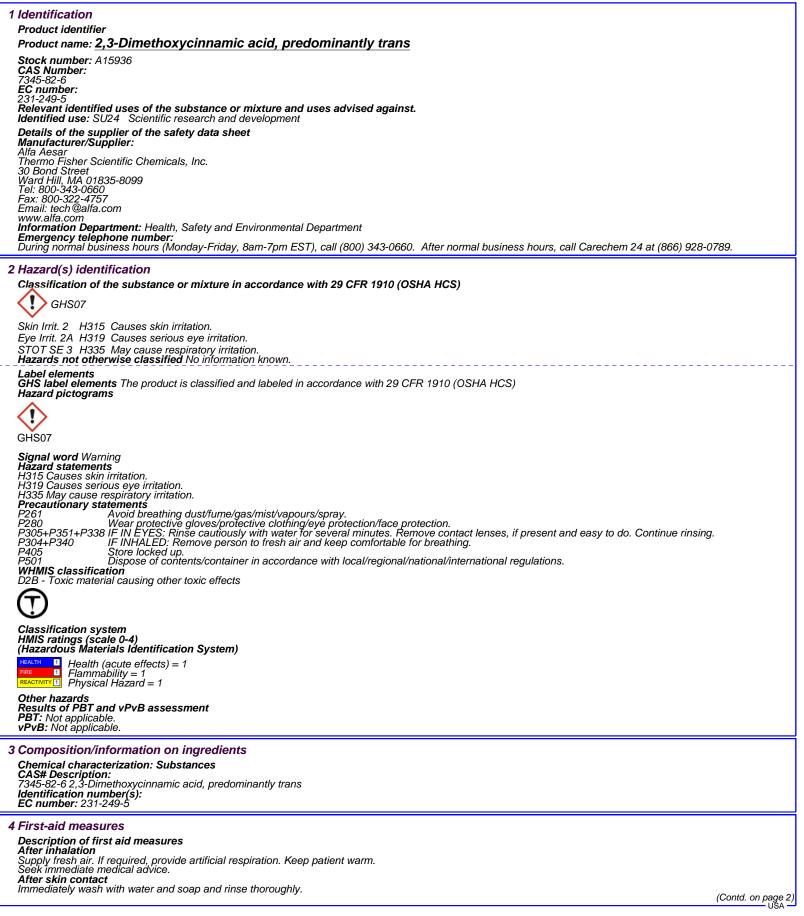


Safety Data Sheet per OSHA HazCom 2012



Product name: 2,3-Dimethoxycinnamic acid, predominantly trans

(Contd. of page 1) Seek immediate medical advice. After eye contact Rinse opened eye for several minutes under running water. Then consult a doctor. After swallowing Seek medical treatment. Information for doctor Most important symptoms and effects, both acute and delayed No further relevant information available. Indication of any immediate medical attention and special freatment needed No further relevant information available. 5 Fire-fighting measures Extinguishing media Suitable extinguishing agents Carbon dioxide, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam. Special hazards arising from the substance or mixture If this product is involved in a fire, the following can be released: Carbon monoxide and carbon dioxide Advice for firefighters Protective equipment: Wear self-contained respirator. Wear fully protective impervious suit. 6 Accidental release measures Personal precautions, protective equipment and emergency procedures Wear protective equipment. Keep unprotected persons away. Ensure adequate ventilation Environmental precautions: Do not allow material to be released to the environment without proper governmental permits. Methods and material for containment and cleaning up: Ensure adequate ventilation. Prevention of secondary hazards: No special measures required. Reference to other sections See Section 7 for information on safe handling See Section 8 for information on personal protection equipment. See Section 13 for disposal information. 7 Handling and storage Handling Precautions for safe handling Keep container tightly sealed. Store in cool, dry place in tightly closed containers. Ensure good ventilation at the workplace. Information about protection against explosions and fires: No information known. Conditions for safe storage, including any incompatibilities Storage Requirements to be met by storerooms and receptacles: No special requirements Information about storage in one common storage facility: Store away from oxidizing agents. Further information about storage conditions: Keep container tightly sealed. Store in cool, dry conditions in well sealed containers. Specific end use(s) No further relevant information available. 8 Exposure controls/personal protection Additional information about design of technical systems: Properly operating chemical fume hood designed for hazardous chemicals and having an average face velocity of at least 100 feet per minute. Control parameters Components with limit values that require monitoring at the workplace: Not required. Additional information: No data Exposure controls Personal protective equipment General protective and hygienic measures The usual precautionary measures for handling chemicals should be followed. Keep away from foodstuffs, beverages and feed. Remove all soiled and contaminated clothing immediately. Wash hands before breaks and at the end of work. Avoid contact with the eyes and skin. Maintain an ergonomically appropriate working environment. Breathing equipment: Use suitable respirator when high concentrations are present. Protection of hands: Impervious gloves Check protective gloves prior to each use for their proper condition. The selection of suitable gloves not only depends on the material, but also on quality. Quality will vary from manufacturer to manufacturer. **Penetration time of glove material (in minutes)** Not determined **Eye protection:** Safety glasses **Body protection:** Protective work clothing. 9 Physical and chemical properties Information on basic physical and chemical properties General Information Appearance: Form: Crystalline powder Color: White Not determined Odor: Odor threshold: Not determined pH-value: Not applicable. 179-183 °C (354-361 °F) Not determined

Change in condition Melting point/Melting range: Boiling point/Boiling range: Sublimation temperature / start: Flammability (solid, gaseous) Ignition temperature: Decomposition temperature: Not determined Not determined Not determined Not determined

(Contd. on page 3)

Product name: 2,3-Dimethoxycinnamic acid, predominantly trans

(Contd.	of	page	2)

		(Contd. of page 2)		
Auto igniting:	Not determined.			
Danger of explosion:	Product does not present an explosion hazard.			
Explosion limits: Lower:	Not determined			
Upper:	Not determined			
Vapor pressure: Density:	Not applicable. Not determined			
Relative density	Not determined.			
Vapor density Evaporation rate	Not applicable. Not applicable.			
Solubility in / Miscibility with				
Water: Partition coefficient (n-octanol/water).	Not determined : Not determined.			
Viscosity:				
dynamic: kinematic:	Not applicable. Not applicable.			
Other information	No further relevant information available.			
10 Stability and reactivity Reactivity No information known. Chemical stability Stable under recomm Thermal decomposition / conditions to Decibility of brownian / conditions to	mended storage conditions. to be avoided: Decomposition will not occur if used and stored according to specifications.			
Possibility of hazardous reactions No Conditions to avoid No further relevant Incompatible materials: Oxidizing ager Hazardous decomposition products:	o dangerous reactions known it information available.			
11 Toxicological information				
Information on toxicological effects Acute toxicity: No effects known.				
LD/LC50 values that are relevant for c				
Skin irritation or corrosion: Causes sk Eye irritation or corrosion: Causes se				
Sensitization: No sensitizing effects kno	own.			
Germ cell mutagenicity: No effects kno	own. on carcinogenic properties of this material is available from the EPA, IARC, NTP, OSHA or ACGIH.			
Reproductive toxicity: No effects know	vn.			
Specific target organ system toxicity Specific target organ system toxicity	 repeated exposure: No effects known. single exposure: May cause respiratory irritation. 			
Aspiration hazard: No effects known				
Subacute to chronic toxicity: No effec Additional toxicological information:	cts known. To the best of our knowledge the acute and chronic toxicity of this substance is not fully known.			
¥				
12 Ecological information Toxicity Aquatic toxicity: No further relevant information available. Persistence and degradability No further relevant information available. Bioaccumulative potential No further relevant information available. Mobility in soil No further relevant information available. Additional ecological information: General notes: Do not allow material to be released to the environment without proper governmental permits. Do not allow undiluted product or large quantities to reach ground water, water course or sewage system. Avoid transfer into the environment. Results of PBT and vPvB assessment				
PBT: Not applicable. vPvB: Not applicable.				
Other adverse effects No further relevant information available.				
13 Disposal considerations				
Waste treatment methods Recommendation Consult state, local or national regulations to ensure proper disposal. Uncleaned packagings: Recommendation: Disposal must be made according to official regulations.				
14 Transport information Not a hazardous material for transportation	ion.			
UN-Number DOT, IMDG, IATA	None			
UN proper shipping name DOT, IMDG, IATA	None			
Transport hazard class(es) DOT, ADR, IMDG, IATA	None			
Class Packing group DOT, IMDG, IATA	None			
Environmental hazards:	Not applicable.			
Special precautions for user	Not applicable.			
Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code Not applicable.				
Transport/Additional information:	Not dangerous according to the above specifications.			
(Contd. on page 4)				
1		USA -		

Page 4/4 Printing date 11/23/2015 Reviewed on 05/23/2011

Product name: 2,3-Dimethoxycinnamic acid, predominantly trans (Contd. of page 3) DOT Marine Pollutant (DOT): No 15 Regulatory information Safety, health and environmental regulations/legislation specific for the substance or mixture GHS label elements The product is classified and labeled in accordance with 29 CFR 1910 (OSHA HCS) Hazard pictograms ! GHS07 Signal word Warning Hazard statements H315 Causes skin irritation. H319 Causes serious eye irritation. H335 May cause respiratory irritation. Precautionary statements Precautionary statements P261 Avoid breathing dust/fume/gas/mist/vapours/spray. P280 Wear protective gloves/protective clothing/eye protection/face protection. P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing. P405 Store locked up. Dispose of contents/container in accordance with local/regional/national/international regulations. National regulations This product is not listed in the U.S. Environmental Protection Agency Toxic Substances Control Act Chemical Substance Inventory. Use of this product is restricted to research and development only. This product must be used by or directly under the supervision of a technically qualified individual as defined by TSCA. This product must not be used for commercial purposes or in formulations for commercial purposes. SARA Section 313 (specific toxic chemical listings) Substance is not listed. California Proposition 65 Prop 65 - Chemicals known to cause cancer Substance is not listed. Prop 65 - Developmental toxicity Substance is not listed. Prop 65 - Developmental toxicity, female Substance is not listed. Prop 65 - Developmental toxicity, male Substance is not listed. Information about limitation of use: For use only by technically qualified individuals. Other regulations, limitations and prohibitive regulations Substance of Very High Concern (SVHC) according to the REACH Regulations (EC) No. 1907/2006. Substance is not listed. The conditions of restrictions according to Article 67 and Annex XVII of the Regulation (EC) No 1907/2006 (REACH) for the manufacturing, placing on the market and use must be observed. Substance is not lister Annex XIV of the REACH Regulations (requiring Authorisation for use) Substance is not listed. Chemical safety assessment: A Chemical Safety Assessment has not been carried out. 16 Other information Employers should use this information only as a supplement to other information gathered by them, and should make independent judgement of suitability of this information to ensure proper use and protect the health and safety of employees. This information is furnished without warranty, and any use of the product not in conformance with this Material Safety Data Sheet, or in combination with any other product or process, is the responsibility of the user. Department issuing SDS: Global Marketing Department Date of preparation / last revision 11/23/2015 / -Abbreviations and acronyms: RID: Reglement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail) IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA) ICAO: International Concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail) IATA-DGR: Dangerous Goods Regulations by the "International Civil Aviation Organization" (ICAO) IMDG: International Air Transportation IATA: International Air Transport Association EINECS: European Inventory of Existing Commercial Chemical Substances CAS: Chemical Abstracts Service (division of the American Chemical Society) HMIS: Hazardous Materials Identification System (ICAA) UHMIS: Workplace Hazardous Materials Information System (Canada) LEGO: Lethal concentration, 50 percent UDS0: Lethal concentration, 50 percent UPWB: very Persistent and very Bioaccumulative ACGIH: American Conference of Governmental Industrial Hygienists (USA) OSH: Occupational Safety and Health Administration (USA) NTP: National Toxicology Program (USA) ARC: International Aprocent (USA) Department issuing SDS: Global Marketing Department USA