

Safety Data Sheet per OSHA HazCom 2012

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1 Identification Product identifier Product name: 5-Hydroxyisophthalic acid Stock number: L00907 CAS Number: 618-83-7 EC number: 210-565-7 Relevant identified uses of the substance or mixture and uses advised against. Identified use: SU24 Scientific research and development Details of the supplier of the safety data sheet Manufacturer/Supplier: Alfa Aesar Thermo Fisher Scientific Chemicals, Inc. Inerrito Fisher Scheman C. 30 Bond Street Ward Hill, MA 01835-8099 Tel: 800-343-0660 Fax: 800-322-4757 Email: tech @alfa.com www.alfa.com Information Department: Health, Safety and Environmental Department Emergency telephone number: During normal business hours (Monday-Friday, 8am-7pm EST), call (800) 343-0660. After normal business hours, call Carechem 24 at (866) 928-0789. 2 Hazard(s) identification Classification of the substance or mixture in accordance with 29 CFR 1910 (OSHA HCS) ! GHS07 Skin Irrit. 2 H315 Causes skin irritation. Eye Irrit. 2A H319 Causes serious eye irritation. STOT SE 3 H335 May cause respiratory irritation. Hazards not otherwise classified No information known. Label elements 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 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. Store locked up. Dispose of contents/container in accordance with local/regional/national/international regulations. P405 WHMIS classification D2B - Toxic material causing other toxic effects Ţ Classification system HMIS ratings (scale 0-4) (Hazardous Materials Identification System) Health (acute effects) = 1Flammàbility = 1 TIVITY 1 Physical Hazard = 1 Other hazards Results of PBT and vPvB assessment PBT: Not applicable. vPvB: Not applicable 3 Composition/information on ingredients Chemical characterization: Substances CAS# Description: 618-83-7 5-Hydroxyisophthalic acid Identification number(s): EC number: 210-565-7 4 First-aid measures Description of first aid measures After inhalation Supply fresh air. If required, provide artificial respiration. Keep patient warm. Seek immediate medical advice. After skin contact Immediately wash with water and soap and rinse thoroughly.

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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. **Revention 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: The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace. Additional information: No data 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. Recommended filter device for short term use: Use a respirator with type N95 (USA) or PE (EN 143) cartridges as a backup to engineering controls. Risk assessment should be performed to determine if air-purifying respirators are appropriate. Only use equipment tested and approved under appropriate government standards. Impervious gloves 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: Powder Color: White Odor: Odorless Odor threshold: Not determined. pH-value: Not applicable. Change in condition Melting point/Melting range: ca 300 °C (ca 572 °F) Boiling point/Boiling range: Not determined

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Sublimation temperature / start: Flash point:	Not determined Not applicable	
Flammability (solid, gaseous) Ignition temperature: Decomposition temperature: Auto igniting:	Not determined. Not determined Not determined Not determined	
Danger of explosion:	Product does not present an explosion hazard.	
Explosion limits: Lower:	Not determined	
Upper: Vapor pressure:	Not determined Not applicable.	
Density: Relative density	Not determined Not determined.	
Vapor density Evaporation rate	Not applicable. Not applicable.	
Solubility in / Miscibility with Water at 20 °C (68 °F):	0.6 q/l	
Partition coefficient (n-octanol/water): Viscosity:	: Not determined.	
dynamic: kinematic:	Not applicable. Not applicable.	
Other information	No applicable. No further relevant information available.	
10 Stability and reactivity Reactivity No information known. Chemical stability Stable under recommended storage conditions. Thermal decomposition / conditions to be avoided: Decomposition will not occur if used and stored according to specifications. Possibility of hazardous reactions Reacts with strong oxidizing agents Conditions to avoid No further relevant information available. Incompatible materials: Oxidizing agents Hazardous decomposition products: Carbon monoxide and carbon dioxide		
11 Toxicological information		
Information on toxicological effects Acute toxicity: The Registry of Toxic Effects of Chemical Substances (RTECS) contains acute toxicity data for this substance.		
LD/LC50 values that are relevant for c Oral LD50 6900 mg/kg (mouse)	classification:	
Skin irritation or corrosion: Causes skin irritation. Eye irritation or corrosion: Causes serious eye irritation. Sensitization: No sensitizing effects known. Germ cell mutagenicity: No effects known. Carcinogenicity: No classification data on carcinogenic properties of this material is available from the EPA, IARC, NTP, OSHA or ACGIH. Reproductive toxicity: No effects known. Specific target organ system toxicity - repeated exposure: No effects known. Specific target organ system toxicity - single exposure: May cause respiratory irritation. Aspiration hazard: No effects known. Subacute to chronic toxicity: No effects known. Additional toxicological information: To the best of our knowledge the acute and chronic toxicity of this substance is not fully known.		
12 Ecological information		i
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 UN-Number DOT, ADN, IMDG, IATA	Not applicable	
UN proper shipping name DOT, ADN, IMDG, IATA	Not applicable	
DOT, ADN, IMDG, IATA Transport hazard class(es) DOT, ADR, ADN, IMDG, IATA Class	Not applicable	
Packing group DOT, IMDG, IATA		
DOT, IMDG, IATA Environmental hazards:	Not applicable Not applicable.	
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Product name: 5-Hydroxyisophthalic acid		
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Special precautions for user	Not applicable.	
Transport in bulk according to Annex II of MA	RPOL73/78 and the IBC Code Not applicable.	
Transport/Additional information:		
DOT Marine Pollutant (DOT):	No	
UN "Model Regulation":		
15 Regulatory information	As which the analysis for the authorization of ministry	
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		
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GHS07		
P304+P340       IF INHALED: Remove person         P405       Store locked up.         P501       Dispose of contents/contained         National regulations       All components of this product are listed in the U         All components of this product are listed on the C         SARA Section 313 (specific toxic chemical list         California Proposition 65         Prop 65 - Chemicals known to cause cancer S         Prop 65 - Developmental toxicity, female Substance is         Prop 65 - Developmental toxicity, male Substance is         Prop 65 - Developmental toxicity was probably and built         California Proposition 65         Prop 65 - Developmental toxicity and Substance is         Prop 65 - Developmental toxicity female Substance is         Prop 65 - Developmental toxicity male Substance is         Prop 65 - Developmental toxicity female Substance is         Prop 65 - Developmental toxicity female Substance is of the regulations and prohibitive         Substance of Very High Concern (SVHC) according to Au         market and use must be observed.         Substance is not listed.	ctive clothing/eyé prótection/face protection. / with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. n to fresh air and keep comfortable for breathing. er in accordance with local/regional/national/international regulations. J.S. Environmental Protection Agency Toxic Substances Control Act Chemical substance Inventory. Canadian Non-Domestic Substances List (NDSL). stings) Substance is not listed. Substance is not listed. stance is not listed. ance is not listed.	
information to ensure proper use and protect the conformance with this Material Safety Data Shee Department issuing SDS: Global Marketing Dep Date of preparation / last revision 11/23/2015 / Abbreviations and acronyms: RD: Reglement integrational concernant le transport des marcha	'/ - nandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail) nereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road) Substances micial Society) Canada)	

INTP: National Toxicology Program (USA) IARC: International Agency for Research on Cancer EPA: Environmental Protection Agency (USA)

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