



1 Identification Product identifier Product name: Pyranine Stock number: L11252 CAS Number: 6358-69-6 EC number: 228-783-6 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 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: 6358-69-6 6-Hydroxy-1,3,8-pyrenetrisulfonic acid trisodium salt Identification number(s): EC number: 228-783-6 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. (Contd. on page 2)

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Seek immediate medical advice. After eve contact Rinse opened eve for	or several minutes under running water. Then consult a doctor.		
After swallowing Seek medical treatme Information for doctor	ent.		
Most important symptoms and effects	ts, both acute and delayed No further relevant information available.		
Indication of any immediate medical a	attention and special freatment needed No further relevant information available.		
5 Fire-fighting measures			
Extinguishing media Suitable extinguishing agents Carbon	n dioxide, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.		
Special hazards arising from the subs	ostance or mixture		
If this product is involved in a fire, the fol Carbon monoxide and carbon dioxide Sulfur oxides (SOx)	illowing can be released:		
Sodium oxide			
Advice for firefighters Protective equipment:			
Wear self-contained respirator.			
Wear fully protective impervious suit.			
6 Accidental release measures			
Personal precautions, protective equi Wear protective equipment. Keep unpro	i pment and emergency procedures otected persons away.		
Ensure adequate ventilation	llow product to reach sewage system or any water course.		
Methods and material for containment	nt and cleaning up: Ensure adequate ventilation.		
Prevention of secondary hazards: No Reference to other sections			
See Section 7 for information on safe ha See Section 8 for information on persona	nal protection equipment.		
See Section 13 for disposal information.	· · · · · · · · · · · · · · · · · · ·		
7 Handling and storage			
Handling Precautions for safe handling			
Keep container tightly sealed.	lantainara		
Store in cool, dry place in tightly closed of Ensure good ventilation at the workplace			
Information about protection against Conditions for safe storage, including	t explosions and fires: No information known.		
Storage			
Information about storage in one com	ms and receptacles: No special requirements. mmon storage facility: Store away from oxidizing agents.		
Further information about storage con Keep container tightly sealed.	onditions:		
Store in cool, dry conditions in well seale Specific end use(s) No further relevant	led containers. It information available		
8 Exposure controls/personal prote			
Additional information about design of Properly operating chemical fume hood	of technical systems: I designed for hazardous chemicals and having an average face velocity of at least 100 feet per minute.		
Control parameters			
Components with limit values that req The product does not contain any releva	ant quantities of materials with critical values that have to be monitored at the workplace.		
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.			
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 eves and skin.			
Maintain an ergonomically appropriate w Breathing equipment: Use suitable res	working environment. spirator when high concentrations are present.		
Protection of hands: Impervious gloves	ipiliter when high concernations are procent.		
Check protective gloves prior to each us	se for their proper condition. y depends on the material, but also on quality. Quality will vary from manufacturer to manufacturer.		
Penetration time of glove material (in	Penetration time of glove material (in minutes) Not determined		
Eye protection: Safety glasses Body protection: Protective work clothin	ning.		
9 Physical and chemical properties	-		
Information on basic physical and che			
General Information Appearance:			
'Form:	Powder Volkow to groop		
Color: Odor:	Yellow to green Not determined		
Odor threshold:	Not determined.		
pH-value: Change in condition	Not applicable.		
Melting point/Melting range: Boiling point/Boiling range:	Not determined Not determined		
Sublimation temperature / start:	Not determined Not determined		
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roduct name: Pyranine		
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Flammability (solid, gaseous)	Not determined.	
Ignition temperature: Decomposition temperature:	Not determined Not determined	
Auto igniting:	Not determined.	
Danger of explosion: Explosion limits:	Not determined.	
Explosion limits: Lower:	hlat data units ad	
Upper:	Not determined Not determined	
Vapor pressure:	Not applicable.	
Density: Relative density	Not determined Not determined	
Vapor density	Not applicable.	
Evaporation rate Solubility in / Miscibility with	Not applicable.	
Water:	Soluble	
Partition coefficient (n-octanol/wate Viscosity:		
dynamic: kinematic:	Not applicable. Not applicable	
kinematic: Other information	Not applicable. No further relevant information available.	
0 Stability and reactivity		
Reactivity No information known. Chemical stability Stable under reco	commanded storage conditions	
Thermal decomposition / conditions	ns to be avoided: Decomposition will not occur if used and stored according to specifications.	
Possibility of hazardous reactions l	Reacts with strong oxidizing agents	
Conditions to avoid No further relevand Incompatible materials: Oxidizing ag	agents	
Hazardous decomposition products	ts:	
Carbon monoxide and carbon dioxide Sulfur oxides (SOx) Sodium oxide	<i>;</i>	
Sodium oxide		
1 Toxicological information		
Information on toxicological effects	ts	
Acute toxicity: The Registry of Toxic	ic Effects of Chemical Substances (RTECS) contains acute toxicity data for this substance.	
LD/LC50 values that are relevant fo Skin irritation or corrosion: Causes		
Eve irritation or corrosion: Causes :	s serious eve irritation.	
Sensitization: No sensitizing effects I Germ cell mutagenicity: No effects I	known.	
Carcinogenicity: No classification da	lata on carcinogenic properties of this material is available from the EPA, IARC, NTP, OSHA or ACGIH.	
Reproductive toxicity: No effects kn	nown.	
Specific target organ system toxicit	s ity - repeated exposure: No effects known. s ity - single exposure: May cause respiratory irritation.	
Aspiration hazard: No effects known	in.	
Subacute to chronic toxicity: No eff Additional toxicological information	ffects known. on: To the best of our knowledge the acute and chronic toxicity of this substance is not fully known.	
<u> </u>		
2 Ecological information Toxicity		
Toxicity Aquatic toxicity: No further relevant i	t information available	
Persistence and degradability No fu	further relevant information available.	
Mobility in soil No further relevant in	ner relevant information available. nformation available.	
Additional ecological information:		
General notes: Do not allow undiluted product or large	ge quantities to reach ground water, water course or sewage system.	
Avoid transfer into the environment.		
Results of PBT and vPvB assessme PBT: Not applicable.	ent	
vPvB: Not applicable. Other adverse effects No further rele	lease the sociable	
	evant information available.	
13 Disposal considerations		
Waste treatment methods Recommendation Consult state loca	cal or national regulations to ensure proper disposal.	
Uncleaned packagings:	5 7 7 7	
Recommendation: Disposal must be	e made according to official regulations. Vater, if necessary with cleansing agents.	
	ater, it necessary with cleansing agents.	
4 Transport information		
UN-Number DOT, ADN, IMDG, IATA	Not applicable	
UN proper shipping name DOT, ADN, IMDG, IATA	Not applicable	
Transport hazard class(es)		
DOT, ADR, ADN, IMDG, IATA Class	Not applicable	
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Packing group DOT, IMDG, IATA	Not applicable	
Environmental hazards:	Not applicable.	
Special precautions for user	Not applicable.	
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Product name: Pyranine	
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Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code Not applicable.	
Transport/Additional information:	
DOT Marine Pollutant (DOT): No	
UN "Model Regulation": -	
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. H315 Causes serious eye irritation. H315 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. P405 Store locked up. P501 Dispose of contents/container in accordance with local/regional/national/international regulations.	
National regulations All components of this product are listed in the U.S. Environmental Protection Agency Toxic Substances Control Act Chemical substance Inventory. All components of this product are listed on the Canadian Domestic Substances List (DSL). 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. Prop 65 - Developmental toxicity, male Substance is not listed. Prop 65 - Developmental toxicity, male Substance is not listed. Prop 65 - Developmental toxicity, male Substance is not listed. Prop 65 - Developmental toxicity, male Substance is not listed. Prop 65 - Developmental toxicity, male Substance is not listed. Prop 65 - Developmental toxicity, anale Substance is not listed. Prop 65 - Developmental toxicity, anale Substance is not listed. Prop 65 - Developmental toxicity, anale Substance is not listed. Prop 65 - Developmental toxicity, anale Substance is not listed. Prop 65 - Developmental toxicity, anale Substance is not listed. Prop 65 - Developmental toxicity 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, market and use must be observed. Substance is not listed. Annex XVI of the PEACH Regulations (regulations for use) Substance is not listed.	
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 suit information to ensure proper use and protect the health and safety of employees. This information is furnished without warranty, and any use of the 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 / -	tability of this product not in
Abbreviations and acronyms: ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road) DOT: US Department of Transportation EINECS: European Inventory of Existing Commercial Chemical Substances CAS: Chemical Abstracts Service (division of the American Chemical Society) HMIS: Hazardous Materials Identification System (USA) WHMIS: Workplace Hazardous Materials Information System (Canada) LC50: Lethal concentration, 50 percent UPVB: very Persistent and very Bioaccumulative ACGIH: American Conference of Governmental Industrial Hygienists (USA) OSHA: Cocupational Safety and Health Administration (USA) WTP: National Toxicology Program (USA) IARC: International Agency for Research on Cancer EPA: Environmental Protection Agency (USA)	
NTP: National Toxicology Program (USA) IARC: International Agency for Research on Cancer	
EPA: Environmental Protection Agency (USA)	USA -