

Safety Data Sheet per OSHA HazCom 2012

1 Identification Product identifier Product name: Xylenecyanol FF, dye content 70% Stock number: B21530 CAS Number: 2650-17-1 EC number: 220-167-5 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 Precadionary 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 um P405 Store locked um 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: 2650-17-1 Xylenecyanol FF Identification number(s): EC number: 220-167-5 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)

Product name: Xylenecyanol FF, dye content 70% (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 Suffur oxides (SOx) Sodium oxide Nitrogen oxides (NOx) 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 product to reach sewage system or any water course. 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: 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 Exposure controls 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 eves and skin. 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. 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: Powder Color: Dark green Not determined Odor: Odor threshold: Not determined pH-value: Not applicable.

(Contd. on page 3)

Product name: Xvlenecvanol FF. dve content 70%

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roduct name: Xylenecyanol FF, dye	e content 70%	
		(Contd. of page 2)
Change in condition		
Melting point/Melting range: Boiling point/Boiling range:	ca 295 °C (ca 563 °F) (dec) Not determined	
Sublimation temperature / start:	Not determined	
Flammability (solid, gaseous) Ignition temperature:	Not determined. Not determined	
Decomposition temperature:	Not determined	
Auto igniting:	Not determined.	
Danger of explosion: Explosion limits:	Not determined.	
Lower:	Not determined	
Upper: Vapor pressure:	Not determined Not applicable.	
Density:	Not determined	
Relative density Vapor density	Not determined. Not applicable.	
Evaporation rate	Not applicable.	
Solubility in / Miscibility with Water:	Not determined	
Partition coefficient (n-octanol/water):		
Viscosity: dynamic:	Not applicable.	
kinematic:	Not applicable.	
Other information	No further relevant information available.	
Stability and reactivity		
Reactivity No information known.		
Chemical stability Stable under recomm	nended storage conditions.	
Thermal decomposition / conditions to Possibility of hazardous reactions Rea	o be avoided: Decomposition will not occur if used and stored according to specifications.	
Conditions to avoid No further relevant	information available.	
Incompatible materials: Oxidizing agen Hazardous decomposition products:	its	
Carbon monoxide and carbon dioxide		
Sulfur oxides (SOx) Sodium oxide		
Nitrogen oxides		
Toxicological information		
Toxicological information		
Information on toxicological effects Acute toxicity: No effects known.		
LD/LC50 values that are relevant for classification: No data		
Skin irritation or corrosion: Causes sk Eye irritation or corrosion: Causes ser		
Sensitization: No sensitizing effects kno	awa	
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 know	n.	
Specific target organ system toxicity	- repeated exposure: No effects known. - single exposure: May cause respiratory irritation	
Specific target organ system toxicity - single exposure: May cause respiratory irritation. Aspiration hazard: No effects known.		
Subacute to chronic toxicity: No effect Additional toxicological information	ts known. To the best of our knowledge the acute and chronic toxicity of this substance is not fully known.	
Ecological information		
Toxicity		
Aquatic toxicity: No further relevant info Persistence and degradability No furth	per relevant information available.	
Bioaccumulative potential No further re	elevant information available	
Mobility in soil No further relevant inform Additional ecological information:	mation available.	
General notes:		
Avoid transfer into the environment	uantities to reach ground water, water course or sewage system.	
Results of PBT and vPvB assessment		
PBT: Not applicable. vPvB: Not applicable.		
Other adverse effects No further releva	nt information available.	
Disposal considerations		
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.		
Recommendation: Disposal must be ma	ade according to official regulations.	
Transport information		
UN-Number		
DOT, ADN, IMDG, IATA	Not applicable	
UN proper shipping name DOT, ADN, IMDG, IATA	Not applicable	
Transport hazard class(es)	Νοι αρμιτσαντο	
DOT, ADR, ADN, IMDG, IATA		
Class	Not applicable	
		(Contd. on page 4)

Product name: Xylenecyanol FF, dye content 70%	, 1
	(Contd. of page 3)
Packing group DOT, IMDG, IATA	Not applicable
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:	
DOT Morino Bollutont (DOT):	No
Marine Pollutant (DOT): UN "Model Regulation":	NO
15 Regulatory information	
Safety, health and environmental regulations/legislation GHS label elements The product is classified and labeled Hazard pictograms	n specific for the substance or mixture in accordance with 29 CFR 1910 (OSHA HCS)
GHS07	
Signal word Warning Hazard statements H315 Causes skin irritation. H315 Causes serious eye irritation. H335 May cause respiratory irritation. Precautionary statements P261 Avoid breathing dust/fume/gas/mist/vap P280 Wear protective gloves/protective clothing P305+P351+P338 IF IN EYES: Rinse cautiously with water P304+P340 IF INHALED: Remove person to fresh a P405 Store locked up. P501 Dispose of contents/container in accord National regulations All components of this product are listed in the U.S. Environ All components of this product are listed on the Canadian D SARA Section 313 (specific toxic chemical listings) Sult California Proposition 65 Prop 65 - Chemicals known to cause cancer Substance Prop 65 - Developmental toxicity Substance is not infermation about limitation of use: For use only by tech Other regulations, limitations and prohibitive regulation	ing/eye protection/face protection. r for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. air and keep comfortable for breathing. dance with local/regional/national/international regulations. mmental Protection Agency Toxic Substances Control Act Chemical substance Inventory. Domestic Substances List (DSL). bstance is not listed. is not listed. rot listed. tisted. not ally qualified individuals. ns the REACH Regulations (EC) No. 1907/2006. Substance is not listed. and Annex XVII of the Regulation (EC) No 1907/2006 (REACH) for the manufacturing, placing on the
information to ensure proper use and protect the héalth and conformance with this Material Safety Data Sheet, or in cor Department issuing SDS: Global Marketing Department Date of preparation / last revision 11/23/2015 / - Abbreviations and acronyms:	In to other information gathered by them, and should make independent judgement of suitability of this d safety of employees. This information is furnished without warranty, and any use of the product not in mbination with any other product or process, is the responsibility of the user.

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