



1 Identification Product identifier Product name: Gallocyanine Stock number: A12936 CAS Number: 1562-85-2 EC number: 216-345-7 Relevant identified uses of the substance or mixture and uses advised against. No further relevant information available. 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 Acute Tox. 4 H302 Harmful if swallowed. Acute Tox. 4 H332 Harmful if inhaled. 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 H302+H332 Harmful if swallowed or if inhaled. Precautionary statements Precatitionary statements P261 Avoid breathing dust/fume/gas/mist/vapours/spray. P264 Wash thoroughly after handling. P270 Do not eat, drink or smoke when using this product. P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. P330 Rinse mouth. WHMIS classification Not controlled Classification system HMIS ratings (scale 0-4) (Hazardous Materials Identification System) 2 Health (acute effects) = 2Flammability = 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: 1562-85-2 1-Carboxy-7-(dimethylamino)-3,4-dihydroxyphenoxazin-5-ium chloride Identification number(s): ÉC number: 216-345-7 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 After skin contact Immediately wash with water and soap and rinse thoroughly. 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 treatment needed No further relevant information available. USA

# (Contd. of page 1)

# 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 Nitrogen oxides (NOX) Hydrogen chloride (HOI) Nitrogen oxides (NOX) Hydrogen chloride (HCl) 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: Dispose of contaminated material as waste according to section 13.

Provide a dequate 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 Precautions for safe nanouning 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

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

# Personal protective equipment

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. 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 P100 (USA) or P3 (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

s r hysical and chemical properties		
Information on basic physical and c General Information Appearance:		
Form:	Powder	
Odor:	Odorless	
Odor threshold:	Not determined.	
pH-value:	Not applicable.	
Change in condition Melting point/Melting range: Boiling point/Boiling range: Sublimation temperature / start: Flammability (solid, gaseous) Ignition temperature: Decomposition temperature: Auto igniting:	Not determined Not determined Not determined Not determined Not determined Not determined Not determined.	

#### Gallo nir

Page 3/4 Printing date 02/02/2016 Reviewed on 02/01/2016

		riewed on 02/01/2016
Product name: Gallocyanine		
		(Contd. of page 2)
Danger of explosion:	Not determined.	
Explosion limits: Lower:	Not determined	
Upper:	Not determined	
Vapor pressure:	Not applicable.	I
Density: Relative density	Not determined Not determined.	
Vapor density	Not applicable.	l
Evaporation rate	Not applicable.	
Solubility in / Miscibility with Water:	Slightly soluble in hot water	
Partition coefficient (n-octanol/wate	er): Not determined.	
Viscosity: dynamic:	Not applicable.	
kinematic:	Not applicable.	I
Other information	No further relevant information available.	
A Stability and reactivity		
0 Stability and reactivity		
Reactivity No information known. Chemical stability Stable under reco	ommended storage conditions.	
Thermal decomposition / condition	reacts with strong oxidizing agents	
Possibility of hazardous reactions i	Reacts with strong oxidizing agents	
Conditions to avoid No further releva Incompatible materials: Oxidizing ag	laents	
Hazardous decomposition products	fs:	
Carbon monoxide and carbon dioxide	3	
Nitrogen oxides Hydrogen chloride (HCI)		
1 Toxicological information		
Information on toxicological effects	S	
Acute toxicity:		
Harmful if swallowed.		
The Registry of Toxic Effects of Cherr	mical Substances (RTECS) contains acute toxicity data for this substance. or classification: No data	
Skin irritation or corresion: May cau	ause irritation	
Skin irritation or corrosion: May cau Eye irritation or corrosion: May cau	USE ITTItation	
Eye irritation or corrosion: May cau Sensitization: No sensitizing effects f	known.	
Germ cell mutagenicity: The Registr	ity of Toxic Effects of Chemical Substances (RTECS) contains mutation data for this substance. ata on carcinogenic properties of this material is available from the EPA, IARC, NTP, OSHA or ACGIH.	
Carcinogenicity: No classification da Reproductive toxicity: No effects kno	ata on carcinogenic properties of this material is available from the EPA, IARO, INTP, USHA OFAGIH.	
Specific target organ system toxicit	ity - repeated exposure: No effects known	
Specific target organ system toxicit	ity - single exposure: No effects known.	
Aspiration hazard: No effects known	n.	
Additional toxicological informatio	iffects known. on: To the best of our knowledge the acute and chronic toxicity of this substance is not fully known.	
Carcinogenic categories		
OSHA-Ca (Occupational Safety & H	Health Administration) Substance is not listed.	
2 Ecological information		
Toxicity		
Aquatic toxicity: No further relevant i	information available.	
Persistence and degradability No fu	further relevant information available.	
Bioaccumulative potential No furthe Mobility in soil No further relevant inf	er relevant information available.	
Additional ecological information:	iomation available.	
General notes:	and the second	
Do not allow material to be released to Avoid transfer into the environment.	to the environment without proper governmental permits.	
Results of PBT and vPvB assessme	ient	
PBT: Not applicable.		
vPvB: Not applicable. Other adverse effects No further rele	evant information available.	
13 Disposal considerations		
Waste treatment methods	n en	
Recommendation Consult state, loca Uncleaned packagings:	al or national regulations to ensure proper disposal.	
Recommendation: Disposal must be	e made according to official regulations.	
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	
	Νυί αμμικανισ	
Packing group DOT, IMDG, IATA	Not applicable	
Environmental hazards:	Not applicable.	
Special precautions for user	Not applicable.	
		(Contd. on page 4

(Contd. on page 4)

USA -

	Neviewed on 02/01/20
roduct name: Gallocyanine	
	(Contd. of page
Transport in bulk according to Annex II of MAR	POL73/78 and the IBC Code Not applicable.
Transport/Additional information:	
DOT Marina Pollutant (DOT):	N/o
Marine Pollutant (DOT): UN "Model Regulation":	No
5 Regulatory information	
Safety, health and environmental regulations/le GHS label elements The product is classified and Hazard pictograms	egislation specific for the substance or mixture labeled in accordance with 29 CFR 1910 (OSHA HCS)
$\wedge$	
$\checkmark$	
GHS07	
Signal word Warning	
Hazard statements H302+H332 Harmful if swallowed or if inhaled.	
Precautionary statements	,
P261 Avoid breathing dust/fume/gas/mist/va P264 Wash thoroughly after handling.	pours/spray.
P270 Do not eat, drink or smoke when using	g this product. air and keep at rest in a position comfortable for breathing.
P330 Rinse mouth.	
	rdance with local/regional/national/international regulations.
This product is not listed in the U.S. Environmental	l Protection Agency Toxic Substances Control Act Chemical Substance Inventory. Use of this product is restrict ust 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	s or in formulations for commercial purposes.
This product is not listed on the Canadian Domestic SARA Section 313 (specific toxic chemical listir	ic Substances List (DSL) or the Canadian Non-Domestic Substances List (NDSL).
California Proposition 65	
Prop 65 - Chemicals known to cause cancer Sul Prop 65 - Developmental toxicity Substance is no	bstance is not listed.
Pron 65 - Developmental toxicity temale Substa	ance is not listed
Prop 65 - Developmental toxicity, male Substand Information about limitation of use: For use only	ce is not listed
Other regulations, limitations and prohibitive re	egulations
Substance of Very High Concern (SVHC) accord	ding to the REACH Regulations (EC) No. 1907/2006. Substance is not listed. icle 67 and Annex XVII of the Regulation (EC) No 1907/2006 (REACH) for the manufacturing, placing on t
market and use must be observed.	רופ לל מחם Annex א אוו טו נוופ לפטעומנוטוו (בכ) איט זאטיזעטטט (הבאכה) וטו נוופ ווומוועומכועווווא, אומטווא טו נ
Substance is not listed. Annex XIV of the REACH Regulations (requiring	a Authorisation for use) Substance is not listed
Chemical safety assessment: A Chemical Safety	Assessment has not been carried out.
Other information	
	upplement to other information gathered by them, and should make independent judgement of suitability of this
conformance with this Material Safety Data Sheet,	upplement to other information gathered by them, and should make independent judgement of suitability of this ealth and safety of employees. This information is furnished without warranty, and any use of the product not in or in combination with any other product or process, is the responsibility of the user.
Department issuing SDS: Global Marketing Depa Date of preparation / last revision 02/02/2016 / - Abbreviations and acronyms:	
ADR: Accord europeen sur le transport des marchandises dangerei DOT: US Department of Transportation	uses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
ADR: Accord europeen sur le transport des marchandises dangere. DOT: US Department of Transportation EINECS: European Inventory of Existing Commercial Chemical Sub CAS: Chemical Abstracts Service (division of the American Chemica HMIS: Hazardous Materials Identification System (USA) WHMIS: Workplace Hazardous Materials Information System (Cana CED) - total approachemistics.	istances al Society)
HMIS: Hazardous Materials Identification System (USA) WHMIS: Workplace Hazardous Materials Information System (Cana LCE0: Lobol concentration, 50 percent	ada)
LC50: Lethal concentration, 50 percent LD50: Lethal concentration, 50 percent VPVB, very Persistent and very Bioaccumulative	
ACGIH: American Conference of Governmental Industrial Hygienist: OSHA: Occupational Safety and Health Administration (USA)	is (USA)

- sts (USA)
- ACGIH: Ámerican Conferencé of Governmental Industrial Hygi OSHA: Occupational Satety and Health Administration (USA) NTP: National Toxicology Program (USA) IARC: International Agency (USA) EPA: Environmental Protection Agency (USA) Acute Tox. 4: Acute toxicity, Hazard Category 4