

Safety Data Sheet per OSHA HazCom 2012

1 Heardbacking Product induction Product induction Stack number: Relation infinition Relation infinition </th <th></th> <th>wea on 00/21/2014</th>		wea on 00/21/2014
Product name: 3.4-01.0th/ordisecumarin Stock number: 4.6198 Charles Number: Reverse Hourise Controls as solution of development Manual Science Controls as a solution of development Reverse Hourise Controls as a solution of the substance or makture and uses advised against. Reverse Hourise Controls as a solution of the substance or makture in accordance with 29 CFR 1910 (OSHA HCS) Controls and a solution of the substance or makture in accordance with 29 CFR 1910 (OSHA HCS) Controls and accord and a solution of the substance or makture in accordance with 29 CFR 1910 (OSHA HCS) Controls and accord and accordance with 29 CFR 1910 (OSHA HCS) Controls and accordance with 20 CFR 1910 (OSHA HCS) Controls and accordance with 29 CFR 1910 (OSHA HCS) Controls and accordance with accordance with 29 CFR 1910 (OSHA HCS) Controls and accordance with accordance with 29 CFR 1910 (OSHA HCS) Controls and accordance with accordance with 20 CFR 1910 (OSHA HCS) Controls and accordance with accordance with 20 CFR 1910 (OSHA HCS) Controls and accordance with accord		
Stock number: 4519 Constraints Constraints Provide Name		
Details of the supplies of the safety data sheet Manufactures Manufactures Others	Stock number: 51050-59-0	
Them: Fasher Scientific Chemicals, Inc. Werk Hin, Wei assp-0005 The Stock 45 OHE The Stock 45 OHE	Details of the supplier of the safety data sheet Manufacturer/Supplier:	
During normal business hours (Monday-Friday, Bam-Tem EST), call (800) 343-0660. After normal business hours, call Carechem 24 at (866) 928-0788. 2 Hazard(s) identification Chasification of the substance or mixture in accordance with 20 CFR 1910 (OSHA HCS)	Thermo Fisher Scientific Chemicals, Inc. 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	
Classification of the substance or mixture in accordance with 29 CFR 1910 (OSHA HCS) WWW GHS00 Skull and crossbones Acute Tox. 3 H001 Toxic if swallowed. WWW GHS07 Shin Ind. 2 H015 Causes asinus oper initiation. Barards not therevise classified No information incomp. Haards not therevise classified No information incomp. WWW GHS06 Signal word Danger Haard Intellorent Haard statements Haard statements H315 Causes skin inflation. Procentionary statements Haard statements H315 Causes stole server limitations H315 Causes stole server limitations H315 Causes of the method H315 Causes of the method H315 Causes stole server limitations H315 Causes stole server limitations	During normal business hours (Monday-Friday, 8am-7pm EST), call (800) 343-0660. After normal business hours, call Carechem 24 at (866) 928	3-0789.
Skin Init. 2 H315 Causes skin irritation. Eye Init. 2A H319 Causes serious yee inflation. Figure 2A H319 Causes described where described is classified and labeled in accordance with 29 CFR 1910 (OSHA HCS) Figure 2A Figure 2A Figure 2A H319 Causes Serie inflation.	Classification of the substance or mixture in accordance with 29 CFR 1910 (OSHA HCS)	
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Eye Irit: 24 H319 Gueses serious eye initation. STOT ISE: 3 H335 My cause respiratory initiation. 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 Generation of the product is classified and labeled in accordance with 29 CFR 1910 (OSHA HCS) Hazard pictograms Generation of the pictograms GHS06 Signal word Danger Hazard pictograms Hazard pictograms H310 Causes serious eye imitation. H313 Toxic If swallowed H314 Causes serious eye imitation. H315 Causes serious eye imitation. H315 Causes serious eye imitation. H315 May cause respiratory inflation. Proceutionary statements Hear protective glowes/protective clothing/eye protection. P301 +P310 IF SWALL OWED: Immediately call a POISON CENTER/ doctor P301 +P310 IF SWALL OWED WHS classification Social clossification accordance with local/regional/national/international regulations. WHMS classification Social clossification accordance with local/regional/national regulations.	GHS07	
GHS label elements The product is classified and labeled in accordance with 29 CFR 1910 (OSHA HCS) Hazard pictograms GH506 Signal word Danger Hazard statements H301 Toxic if swallowed. H315 Causes skin intation. H316 Causes skin intation. H316 Causes skin intation. H316 Causes skin intation. H2001 Toxic if swallowed. Precautionary statements Product breathing dust/lume/gas/mist/vapours/spray. P261 Avoid breathing dust/lume/gas/mist/vapours/spray. P261 Avoid breathing dust/lume/gas/mist/vapours/spray. P261 Mean protective glowes/protective clothing/eys protection/face protection. P301 P310 IF SWALLOWED: Immediately call a POISON CENTER/ doctor P301 P310 IF SWALLOWED: Immediately call a POISON CENTER/ doctor P301 P310 IF SWALLOWED: Immediate and serious toxic effects D2B2 Fork material causing immediate and serious toxic effects D2B3 Fork material causing immediate and serious toxic effects D2B3 Fork material causing immediate and serious toxic effects D2B3 Fork material causing immediate and serious toxic effects D2B3 Fork material causing the series Haland (acute effects) = 2 <	Eye Irrit. 2A H319 Causes serious eye irritation.	
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Hazard statements H331 Tock if swallowed. H331 Causes skin initiation. H331 Causes skin initiation. H335 May cause respirator P281 P281 P281 P326 P335 May cause respirator P331 P310 P31 P31 <p310< td=""> P31 P310 P31 P320 P31 P320 P31 P320 P31 P320 P31 P320 P31 P31<p310< td=""> P31 P31<p310< td=""></p310<></p310<></p310<></p310<></p310<></p310<></p310<></p310<></p310<></p310<>	GHS06	
HMIS ratings (scale 0-4) (Hazardous Materials Identification System) Health (acute effects) = 2 Flammability = 1 Physical Hazards = 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: 51050-59-0 3,4-Dichloroisocoumarin 4 First-aid measures General information Immediately remove any clothing soiled by the product.	Hāzard statemenīts H301 Toxic if swallowed. H315 Causes skin irritation. H319 Causes serious eye irritation. H325 May cause respiratory irritation. H326 May cause respiratory irritation. P280 Precautionary statements P280 Wear protective gloves/protective clothing/eye protection/face protection. P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/ doctor/ P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsi. P405 Store locked up. P501 Dispose of contents/container in accordance with local/regional/international regulations. WHMIS classification D1A - Very toxic material causing immediate and serious toxic effects	ng.
Other hazards Results of PBT and vPvB assessment PBT: Not applicable. 3 Composition/information on ingredients Chemical characterization: Substances CAS# Description: 51050-59-0 3,4-Dichloroisocoumarin 4 First-aid measures Description of first aid measures General information Immediately remove any clothing soiled by the product.	HMIS ratings (scale 0-4) (Hazardous Materials Identification System) HEALTH 2 Health (acute effects) = 2 File 1 File 1	
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Description of first aid measures General information Immediately remove any clothing soiled by the product.	Chemical characterization: Substances CAS# Description:	
General information Immediately remove any clothing soiled by the product.	4 First-aid measures	
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	inimediately remove any clotning solied by the product.	(Contd. on page 2) USA

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Product name: 3,4-Dichloroisocoumarin	
In case of irregular breathing or respiratory arrest provide artificial respiration. 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. Seek immediate medical advice. After eye contact Rinse opened eye for several minutes under running water. Then consult a doctor. After swallowing Do not induce vomiting; immediately call for medical help. Information for doctor Most important symptoms and effects, both acute and delayed No further relevant information available.	(Contd. of page 1)
Indication of any immediate medical attention and special treatment 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 for 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 Hydrogen chloride (HCl) Advice for firefighters Protective equipment: Wear self-contained respirator. Wear fully protective impervious suit.	m.
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: Dispose of contaminated material as waste according to section 13. 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 13 for disposal information.	
7 Handling and storage Handling Precautions for safe handling Keep container tightly sealed. 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: Refrigerate Information about storage in one common storage facility: Protect from heat. Store away from oxidizing agents. Further information about storage conditions: Keep container tightly sealed. Refrigerate 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 General 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 solied 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. Protections 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: Trolective work clothing.	
9 Physical and chemical properties	
Information on basic physical and chemical properties General Information Appearance: Form: Powder Color: White to off-white Odor: Not determined	(Costd en anna 2)
	(Contd. on page 3) USA

Product name: 3,4-Dichloroisocoumarin

Product name: 3,4-Dichloroisocoum	arin		
	(Contd. of pag		
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.		
Danger of explosion:	Not determined.		
Explosion limits: Lower: Upper: Vapor pressure: Density: Relative density Vapor density Evaporation rate Solubility in / Miscibility with Water: Partition coefficient (n-octanol/water): Viscosity: dynamic: kinematic: Other information	Not determined Not applicable. Not determined Not determined. Not applicable. Not applicable. Not applicable.		
10 Stability and reactivity			
Reactivity No information known. Chemical stability Stable under recomm Thermal decomposition / conditions to Possibility of hazardous reactions Re Conditions to avoid No further relevant Incompatible materials: Oxidizing agents Heat Hazardous decomposition products: Carbon monoxide and carbon dioxide Hydrogen chloride (HCI)	b be avoided: Decomposition will not occur if used and stored according to specifications. acts with strong oxidizing agents		
11 Toxicological information Information on toxicological effects Acute toxicity: Toxic if swallowed. LD/LC50 values that are relevant for classification: No data 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 - single 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.			
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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 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	r national regulations to ensure proper disposal. ade according to official regulations.		
14 Transport information			
UN-Number	11012044		
DOT, IMDG, IATA UN proper shipping name	UN2811		
DOT IMDG, IATA	Toxic solids, organic, n.o.s. (3,4-Dichloroisocoumarin) TOXIC SOLID, ORGANIC, N.O.S. (3,4-Dichloroisocoumarin)		

(Contd. on page 4) USA

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	Reviewed on 05/27/2014
oduct name: 3,4-Dichloroisocoumarin	
	(Contd. of page 3
Transport hazard class(es)	
DOT	
Class	6.1 Toxic substances.
Label	6.1
Class Label	6.1 (T2) Toxic substances 6.1
IMDG, IATA	
×	
Class	6.1 Toxic substances.
Label	6.1
Packing group	
DOT, IMĎG, IATA	
Environmental hazards:	Not applicable.
Special precautions for user EMS Number:	Warning: Toxic substances F-A.S-A
Transport in bulk according to Annex II of MARPOL7) -) -
Transport/Additional information:	
DOT	
Marine Pollutant (DOT):	No
UN "Model Regulation":	UN2811, Toxic solids, organic, n.o.s. (3,4-Dichloroisocoumarin), 6.1, III
Safety, health and environmental regulations/legislat GHS label elements The product is classified and labele Hazard pictograms	ed in accordance with 29 CFR 1910 (OSHA HCS)
P500 Dispose of contents/container in acco National regulations This product is not listed in the U.S. Environmental Prote to research and development only. This product must be product must not be used for commercial purposes or in This product is not listed on the Canadian Domestic Sub SARA Section 313 (specific toxic chemical listings) S California Proposition 65	ater for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. ordance with local/regional/national/international regulations. ection Agency Toxic Substances Control Act Chemical Substance Inventory. Use of this product is restricte e used by or directly under the supervision of a technically qualified individual as defined by TSCA. This formulations for commercial purposes. Distances List (DSL) or the Canadian Non-Domestic Substances List (NDSL). Substance is not listed.
Prop 65 - Chemicals known to cause cancer Substan Prop 65 - Developmental toxicity Substance is not liste Prop 65 - Developmental toxicity, female Substance is Prop 65 - Developmental toxicity, male Substance is Information about limitation of use: For use only by te	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 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 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.

conformance with this Material Safety Data Sheet, or in combination with any other product or process, is the responsibility of the use Department issuing SDS: Global Marketing Department Date of preparation / last revision 11/24/2015 / -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) IMDG: International Maritime Code for Dangerous Goods DOT: US Department of Transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road) IMDG: International Maritime Code for Dangerous Goods DOT: US Department of Transport Association 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 UPU Evy Persistent and very Bioaccumulative ACGIH: American Cherrence of Governmental Industrial Hygienists (USA) OSHA: Occupational Safety and Health Administration (USA) NTP: National Toxicology Program (USA)

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Product name: 3,4-Dichloroisocoumarin

IARC: International Agency for Research on Cancer EPA: Environmental Protection Agency (USA) Page 5/5 Printing date 11/24/2015 Reviewed on 05/27/2014

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USA -