

Safety Data Sheet per OSHA HazCom 2012

<ul> <li>1 Identification</li> <li>Product leading</li> <li>Product lea</li></ul>	
Succ. Tumber:       E24-76         CAS Mumber:       Experiment         Construction:       Construction:         Construction:       Construction:      <	Product identifier
Fight Groot O Fight Groot O	Stock number: B22476 CAS Number: 34040-64-7
ManufacturerSkippler:	251-806-6 Relevant identified uses of the substance or mixture and uses advised against. Identified use: SU24 Scientific research and development
Ward Hall, MA 01025-0009         Yes: B0: 22-2477         Errors: Excellential com         Information: Department: Health, Safety and Environmental Department         Environmental business hours, Laboras, Friday, Bam-Tym EST, call (800) 343-0600. After normal business hours, call Canachem 24 at (800) 928-0788.         Carsettaration of the substance or mixture in accordance with 29 CFR 1910 (OSHA HCS)         Weak         Weak         Shin Corr: 18 H314 Causes severe skin burns and eye damage.         Eye Durn: 1. 1916 Causes severe skin burns and eye damage.         Eye Durn: 1. 1916 Causes severe skin burns and eye damage.         Eye Durn: 1. 1916 Causes severe skin burns and eye damage.         Eye Durn: 1. 1916 Causes severe skin burns and eye damage.         Eye Durn: 1. 1916 Causes severe skin burns and eye damage.         Eye Durn: 1. 1916 Causes severe skin burns and eye damage.         Eye Durn: 1. 1916 Causes severe skin burns and eye damage.         Eye Durn: 1. 1916 Causes severe skin burns and eye damage.         Eye Durn: 1. 1916 Causes severe skin burns and eye damage.         Eye Durn: 1. 1916 Causes severe skin burns and eye damage.         Point Staff Park 1916 Decause severe skin burns and eye damage.         Point Staff Park 1916 Decause severe skin burns and eye damage.         Point Staff Park 1916 Decause severe skin burns and eye damage.         Point Staff Park 1916 Decause severe skin burns	Manufacturer/Supplier: Alfa Aesar Thermo Fisher Scientific Chemicals, Inc.
With alls component: Health, Salaty and Environmental Department Enromation By Bonnent: Health, Salaty and Environmental Department Enromation By Bonne Health, Salaty and Environmental Department Enromation By Bonne Health Usalates in the Salation of the substance or mixture in accordance with 29 CFR 1910 (OSHA HCS)         21 Hazard(s) Identification Christieation of the substance or mixture in accordance with 29 CFR 1910 (OSHA HCS)         20 High Correspondence on the substance or mixture in accordance with 29 CFR 1910 (OSHA HCS)         21 Hazard(s) Identification Christieation of the substance or mixture in accordance with 29 CFR 1910 (OSHA HCS)         22 Hazard probability of the Substance or mixture in accordance with 29 CFR 1910 (OSHA HCS)         23 Hazard probability of the Substance or mixture in accordance with 29 CFR 1910 (OSHA HCS)         24 Hazard probability of the Substance or mixture in accordance with 29 CFR 1910 (OSHA HCS)         24 Hazard probagness         25 Habel elements By Substance of the Substance or module is classified and labeled in accordance with 29 CFR 1910 (OSHA HCS)         26 Hostic         27 Hazard probability of the Substance or module is classified and labeled in accordance with 29 CFR 1910 (OSHA HCS)         26 Hostic         27 Hazard word Danger Hazard steements By Substance of the Substance or module in accordance with local/ng/onal/national/international regulations.         26 Hostic Hazard Hazard Substance or horize fields in substance or notice fields Correspondence of the Substance or contract fields in substance or notice fields Cororespondententificatin Probability and the Substance or contract	Ward Hill, MA 01835-8099 Tel: 800-343-0660 Fax: 800-322-4757
2 Hazard(s) identification         Chestification of the substance or mixture in accordance with 29 CFR 1910 (OSHA HCS)         Of Host Storasion         Skin Corr. 18 H314 Causes severe skin burns and eye damage.         Hazards not otherwise classified on information in norm.         Label elements         OffS label elements         Page all word Danger         Hazer of store shar for half. Tabe of immediately all contaminitings. Itemore contact lemes, if procent and easy to do. Continue rinsing.         Page Stiff label elements         OffS label elements         OffS label elements         OffS label elements         Page Stiffs label elements         Page Stiffs label elements         OffS	www.alfa.com Information Department: Health, Safety and Environmental Department Emergency telephone number:
Classification of the substance or mixture in accordance with 29 CFR 1910 (OSHA HCS) White Control Physical Contents By Dem, 1, H318 Causes server skin burns and eye damage. Fixe Dem, 1, H318 Causes server skin burns and eye damage. Fixed a not otherwise classified No information (nown. Label elements GMS label elements MS label elements MS label elements MS label elements MS label elements MS label elements GMS label elements MS label elements Control breathe dust/fume/gas/mit/vapours/spray. MS label elements Control breathe dust/fume/gas/mit/vapours/spray. MS label elements Elements Control breathe dust/fume/gas/mit/vapours/spray. MS label elements Elements Control breathe dust/fume/gas/mit/vapours/spray. MS label elements Elements Sub label elements Control breathe dust/fume/gas/mit/vapours/spray. MS label elements Sub label elements Control breathe dust/fume/gas/mit/vapours/spray. MS label elements Sub label elements Control breathe dust/fume/gas/mit/vapours/spray. MS label elements Sub label elements Sub label elements Sub label elements Sub label elements Control breathe dust/fume/gas/mit/vapours/spray. MS label elements Sub label elements S	
Skin Corr. 18 H314 Causes severe skin burns and eye damage. Fye Dam. 1 H318 Causes severe skin burns and eye damage. Hazards not otherwise classified Join dironation known. Label elements Great determines The product is classified and labeled in accordance with 29 CFR 1910 (OSHA HCS) Hazards not otherwise classified Join dironation known. Label elements Great determines The product is classified and labeled in accordance with 29 CFR 1910 (OSHA HCS) Hazards not otherwise classified Join dironation known. H314 Causes severe skin burns and eye damage. H314 Causes severe skin burns and by e damage. H314 Causes severe skin burns and eye damage. H314 Causes severe skin burns and by e damage. H314 Causes severe skin burns and by e damage. H314 Causes severe skin burns and eye damage. H314 Causes severe skin burns and by e damage. H314 Causes severe skin burns and eye damage. H314 Causes severe severe severes severes severes severes severes severes severes severes. H314 Causes severes severes severes severes severes severes severes severes. H314 Causes forming source and claim severe any clothing solied by the product. H314 Causes forming severes severes severes severes	Classification of the substance or mixture in accordance with 29 CFR 1910 (OSHA HCS)
Label elements GHS label elements The product is classified and labeled in accordance with 29 CFR 1910 (OSHA HCS) Haard pictograms Signal word Danger Haard statements Do not breathe dustfume/gas/mist/apours/spray. P303-P351 H2S3 (In other of Immediately all contaminated clothing. Rinse skin with water/shower. P303-P351 H2S3 (In other of Immediately all contaminated clothing. Rinse skin with water/shower. P303-P351 H2S3 (In other of Immediately all contaminated clothing. Rinse skin with water/shower. P303-P351 H2S3 (In other of Immediately all contaminated clothing. Rinse skin with water/shower. P303-P351 H2S3 (In other of Immediately all contaminated clothing. Rinse skin with water/shower. P303-P351 H2S3 (In other of Immediately all contaminated clothing. Rinse skin with water/shower. P303-P351 H2S3 (In other of Immediately all contaminated clothing. Rinse skin with water/shower. P303-P351 H2S3 (In other of Immediately all contaminated clothing. Rinse skin with water/shower. P303-P351 H2S3 (In other of Immediately all contamines in accordance with local/regional/international regulations. WHMS classification system HMS rainges (Scale 0-4) (Hazardous Materials Identification System) HMS rainges (Scale 0-4) (Hazardous Materials Identification Sustances CASB Description. Substances CASB Description. Substances CASB Description of Inst ald measures Composition/information on ingredients Chemical characterization: Substances CASB Description of Inst ald measures Description of Inst ald measures Composition number(s): Er number (S): Er number (	Skin Corr. 1B H314 Causes severe skin burns and eye damage.
Signal word Danger Hard Categories Free Constraints and eye damage. Free Constraints Severe and the Mums and eye damage. Free Constraints Constraints and eye damage. Free Constraints Constraint	Label elements GHS label elements The product is classified and labeled in accordance with 29 CFR 1910 (OSHA HCS)
Signal word Danger Hard Categories Free Constraints and eye damage. Free Constraints Severe and the Mums and eye damage. Free Constraints Constraints and eye damage. Free Constraints Constraint	GHS05
WiMINS classification         D2B - Toxic material causing other toxic effects         E - Corrosive material         D10 - Toxic material causing other toxic effects         E - Corrosive material         D10 - Toxic material causing other toxic effects         E - Corrosive material         D10 - D10         Classification system         HMIS ratings (scale 0-4)         (Hazardous Materials Identification System)         Health (acute effects) = 2         Flormability = 1         Physical Hazard = 1         Other hazards         Results of PBT and vPvB assessment         PBT: Not applicable.         3 Composition/information on ingredients         Chemical characterization: Substances         CASK Description:         34040-64-7 Methyl + (chioromethyl)benzoate         Identification number(s):         EC number: 251-806-80         4 First-aid measures         Description of first aid measures         General information immediately remove any clothing soiled by the product.         Arter inhalation         Supply fresh air. If required, provide artificial respiration. Keep patient warm.         Seek immediate medical advice.         Arter skin contact         Immediate medical advice.	Signal word Danger Hazard statements H314 Causes severe skin burns and eye damage. Precautionary statements P260 Do not breathe dust/fume/gas/mist/vapours/spray. P303+P361+P353 If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P301+P330+P331 IF SWALLOWED: rinse mouth. Do NOT induce vomiting. P405 Store locked up.
HMIS ratings (scale 0-4) (Hazardous Materials Identification System)         Image: Planmability = 1 Flammability = 1 Physical Hazard = 1         Other hazards Results of PBT and vPvB assessment PBT: Not applicable.         3 Composition/information on ingredients Chemical characterization: Substances CASH Description: 34040-64-77 Methyl 4-(chloromethyl)benzoate Identification number(s): EC number: 251-806-6         4 First-aid measures Description of first aid measures General information Immediately remove any clothing soiled by the product. After infulation Supply fresh air. If required, provide artificial respiration. Keep patient warm. Seek immediate medical advice.	WHMIS classification D2B - Toxic material causing other toxic effects
HMIS ratings (scale 0-4) (Hazardous Materials Identification System)         Image: Planmability = 1 Flammability = 1 Physical Hazard = 1         Other hazards Results of PBT and vPvB assessment PBT: Not applicable.         3 Composition/information on ingredients Chemical characterization: Substances CASH Description: 34040-64-7 Methyl 4-(chloromethyl)benzoate Identification number(s): EC number: 251-806-6         4 First-aid measures Description of first aid measures General information Immediately remove any clothing soiled by the product. After inhalation Supply fresh air. If required, provide artificial respiration. Keep patient warm. Seek immediate medical advice.	
Image: Second	HMIS ratings (scale 0-4) (Hazardous Materials Identification System)
PBT: Not applicable.         vPvB: Not applicable.         3 Composition/information on ingredients         Chemical characterization: Substances         CAS# Description:         34040-64-7 Methyl 4-(chloromethyl)benzoate         Identification number(s):         EC number: 251-806-6         4 First-aid measures         Description of first aid measures         General information Immediately remove any clothing soiled by the product.         After inhalation         Supply fresh air. If required, provide artificial respiration. Keep patient warm.         Seek immediately wash with water and soap and rinse thoroughly.         Seek immediately wash with water and soap and rinse thoroughly.	REACTIVITY     Physical Hazard = 1       Other hazards
Chemical characterization: Substances CAS# Description: 34040-64-7 Methyl 4-(chloromethyl)benzoate Identification number(s): EC number: 251-806-6 4 First-aid measures Description of first aid measures General information Immediately remove any clothing soiled by the product. 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.	PBT: Not applicable.
4 First-aid measures Description of first aid measures General information Immediately remove any clothing soiled by the product. 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.	Chemical characterization: Substances CAS# Description: 34040-64-7 Methyl 4-(chloromethyl)benzoate Identification number(s):
General information Immediately remove any clothing soiled by the product. 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.	4 First-aid measures
After skin contact Immediately wash with water and soap and rinse thoroughly. Seek immediate medical advice.	General information Immediately remove any clothing soiled by the product. After inhalation Supply fresh air. If required, provide artificial respiration, Keep patient warm.
(Contd. on page 2) USA	After skin contact Immediately wash with water and soap and rinse thoroughly. Seek immediate medical advice.
	(Contd. on page US

## Product name: Methyl 4-(chloromethyl)benzoate (Contd. of page 1) 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 Causes severe skin burns. Causes serious eye damage. 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 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 Hydrogen chloride (HCI) 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: Use neutralizing agent. 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 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. Store away from strong bases. 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: Not required. 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. 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. Eye protection: Tightly sealed goggles fáce protectio Body protection: Protective work clothing. 9 Physical and chemical properties Information on basic physical and chemical properties General Information Appearance: Form: Low melting solid Not determined Odor: Odor threshold: Not determined. pH-value: Not applicable. (Contd. on page 3)

## Product name: Methyl 4-(chloromethyl)benzoate

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roduct name: Methyl 4-(chlorometh	.hyl)benzoate	
	(Contr	td. of page 2)
Change in condition Melting point/Melting range: Boiling point/Boiling range: Sublimation temperature / start:	39-40 °C (102-104 °F) 160-165 °C (320-329 °F) (30mm Hg) Not determined	
Flash point: Flammability (solid, gaseous) Ignition temperature: Decomposition temperature:	Not applicable Not determined. Not determined Not determined	
Auto igniting:	Not determined.	
Danger of explosion: Explosion limits: Lower: Upper:	Product does not present an explosion hazard. Not determined Not determined	
Vapor pressure: Density: Relative density	Not applicable. Not determined Not determined.	
Vapor density Evaporation rate Solubility in / Miscibility with Water:	Not applicable. Not applicable. Not determined	
Partition coefficient (n-octanol/water): Viscosity: dynamic:	r): Not determined. Not applicable.	
kinematic: Other information	Not applicable. No further relevant information available.	
<ul> <li>Stability and reactivity</li> <li>Reactivity No information known.</li> <li>Chemical stability Stable under recommodiate the possibility of hazardous reactions No Conditions to avoid No further relevant Incompatible materials:</li> <li>Oxidizing agents</li> <li>Bases</li> <li>Hazardous decomposition products: Carbon monoxide and carbon dioxide Hydrogen chloride (HCI)</li> </ul>	nt information available.	
LD/LC50 values that are relevant for c Skin irritation or corrosion: Causes se Eye irritation or corrosion: Causes ser Sensitization: No sensitizing effects kno Germ cell mutagenicity: No effects know Carcinogenicity: No classification data Reproductive toxicity: No effects know Specific target organ system toxicity - Specific target organ system toxicity Aspiration hazard: No effects known. Subacute to chronic toxicity: No effects	severe skin burns. erious eye damage. nown. a on carcinogenic properties of this material is available from the EPA, IARC, NTP, OSHA or ACGIH. wn. <b>y - repeated exposure:</b> No effects known. <b>y - single exposure:</b> No effects known.	
2 Ecological information Toxicity Aquatic toxicity: No further relevant infor Persistence and degradability No further Bioaccumulative potential No further re Mobility in soil No further relevant infor Additional ecological information: General notes: Do not allow material to be released to th Do not allow material to be released to th Do not allow undiluted product or large q Avoid transfer into the environment. Results of PBT and vPvB assessment PBT: Not applicable. VPvB: Not applicable. Other adverse effects No further relevant	ther relevant information available. relevant information available. ormation available. the environment without proper governmental permits. quantities to reach ground water, water course or sewage system. <b>nt</b>	
3 Disposal considerations Waste treatment methods		
	or national regulations to ensure proper disposal. made according to official regulations.	
4 Transport information		
UN-Number DOT, IMDG, IATA	UN3261	
UN proper shipping name DOT IMDG, IATA	Corrosive solid, acidic, organic, n.o.s. (Methyl 4-(chloromethyl)benzoate) CORROSIVE SOLID, ACIDIC, ORGANIC, N.O.S. (Methyl 4-(chloromethyl benzoate)	γI)
		d. on page

(Contd. on page 4)

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er OSHA HazCom 2012	Printing date 11/24/2015 Reviewed on 02/23/2007
roduct name: Methyl 4-(chloromethyl)benzoat	
	(Contd. of page 3)
Transport hazard class(es)	
DOT	
Class	8 Corrosive substances.
Label Class	8 8 (C4) Corrosive substances
Label IMDG, IATA	8
<u>As</u>	
$\checkmark$	
Class	8 Corrosive substances.
Label	8
Packing group DOT, IMDG, IATA	III
Environmental hazards:	Not applicable.
Special precautions for user Segregation groups	Warning: Corrosive substances Acids
Transport in bulk according to Annex II of MARPOL	
Transport/Additional information:	
DOT Marine Pollutant (DOT):	No
UN "Model Regulation":	UN3261, Corrosive solid, acidic, organic, n.o.s. (Methyl 4-(chloromethyl)benzoate),
	8, III
5 Regulatory information	
	ation specific for the substance or mixture
Safety, health and environmental regulations/legisla GHS label elements The product is classified and labe Hazard pictograms	ed in accordance with 29 CFR 1910 (OSHA HCS)
GHS05	
Signal word Danger	
Hazard statements H314 Causes severe skin burns and eye damage.	
Precautionary statements	vanoure/enrav
P303+P361+P353 If on skin (or hair): Take off immedia	vapours/spray. ately all contaminated clothing. Rinse skin with water/shower. vater for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. NOT induce vomiting.
P305+P357+P338 IF IN EYES. Rillse caulously will w P301+P330+P331 IF SWALLOWED: rinse mouth. Do N	Aller for several minutes. Remove contact lenses, if present and easy to do. Continue finding. NOT induce vomiting.
P405 Store locked up. P501 Dispose of contents/container in acc	cordance with local/regional/national/international regulations.
National regulations	tection Agency Toxic Substances Control Act Chemical Substance Inventory. Use of this product is restricte
to research and development only. This product must b product must not be used for commercial purposes or ir SARA Section 313 (specific toxic chemical listings)	be used by or directly under the supervision of a technically qualified individúal as defined by TSCA. This in formulations for commercial purposes.
California Proposition 65 Prop 65 - Chemicals known to cause cancer Substar	nce is not listed.
Prop 65 - Developmental toxicity Substance is not list Prop 65 - Developmental toxicity, female Substance	is not listed.
Prop 65 - Developmental toxicity, male Substance is Information about limitation of use: For use only by t	s not listed.
Other regulations, limitations and prohibitive regula	ations
The conditions of restrictions according to Article 6 market and use must be observed.	t to the REACH Regulations (EC) No. 1907/2006. Substance is not listed. 67 and Annex XVII of the Regulation (EC) No 1907/2006 (REACH) for the manufacturing, placing on the
Substance is not listed. Annex XIV of the REACH Regulations (requiring Aut	thorisation 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 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 association ENTE: US Department of Transport association ENTE: Suropean Inventory of Existing Commercial Chemical Substances CAS: Chemical Abstracts Service (division of the American Chemical Substances CAS: Chemical Abstracts Service (division of the American Chemical Society) HMIS: Hazardous Materials Information System (CAnada) LC50: Lethal concentration, 50 percent LD50: Lethal dose, 50 percent VPWs very Persistent and very Bioaccumulative ACGIH: American Conference of Governmental Industrial Hygienists (USA) OSHA: Occupational Safety and Health Administration (USA) NTP: National Toxicology Program (USA) IARC: International Agency for Research on Cancer EPA: Environmental Protection Agency (USA)