



(Contd. on page 2)

	Reviewed of 11/	03/2010
1	1 Identification Product identifier	
	Product name: N-Methyl-D-phenylalanine	
	Stock number: H65675 CAS Number: 56564-52-4	
	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. 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	2 Hazard(s) identification Classification of the substance or mixture in accordance with 29 CFR 1910 (OSHA HCS) The substance is not classified according to the Globally Harmonized System (GHS).	
	Hazards not otherwise classified No information known.	
	GHS label elements Not applicable Hazard pictograms Not applicable Signal word Not applicable	
	Hăzard statements Not applicable WHMIS classification Not controlled Classification system	
	HMIS ratings (scale 0-4) (Hazardous Materials Identification System)	
	HEALTH 1 HEALTH 1 FRE 1 Flammability = 1 REACTIVITY Physical Hazard = 1	
	Other hazards Results of PBT and vPvB assessment PBT: Not applicable. vPvB: Not applicable.	
3	3 Composition/information on ingredients Chemical characterization: Substances	
	CAS# Description: 56564-52-4 N-Methyl-D-phenylalanine	
4	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. 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.	
5	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) Advice for firefrances	
	Advice for firefighters Protective equipment: Wear self-contained respirator. Wear fully protective impervious suit.	
6	6 Accidental release measures Personal precautions, protective equipment and emergency procedures	
	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: Pick up mechanically. 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.	
	(Contd. o	on page 2)

Product name: N-Methyl-D-phenylalanine

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.					
Information about protection against explosions and fires: No information known.					
Conditions for safe storage, including any incompatibilities					
Storage Requirements to be met by storeroor	ns and receptacles: No special requirements.				
Information about storage in one cor	ins and receptables in the special requirements.				
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 re	quire monitoring at the workplace: and quantities of materials, with critical values that have to be monitored at the workplace				
Additional information: No data	The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.				
Exposure controls					
Personal protective equipment					
General protective and hygienic mea					
The usual precautionary measures for handling chemicals should be followed. Keep away from foodstuffs, beverages and feed.					
Remove all soiled and contaminated clo	thing immediately.				
Wash hands before breaks and at the end of work.					
Maintain an ergonomically appropriate	working environment. spirator when high concentrations are present.				
Recommended filter device for short	term use:				
Use a respirator with type N95 (USA) o	PE (EN 143) cartridges as a backup to engineering controls. Risk assessment should be performed to determine if air-				
purifying respirators are appropriate. O Protection of hands:	nly use equipment tested and approved under appropriate government standards.				
Impervious gloves					
Check protective gloves prior to each u	se 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.					
Body protection: Protective work cloth	Eye protection: Safety glasses				
9 Physical and chemical properties	S				
Information on basic physical and chemical properties					
General Information					
Appearance: Form:	Powder				
Color:	White				
Odor:					
	Not determined				
Odor threshold:	Not determined.				
Ödor threshold: pH-value:					
Odor threshold: pH-value: Change in condition	Not determined. Not applicable.				
Odor threshold: pH-value: Change in condition Melting point/Melting range:	Not determined. Not applicable. Not determined				
Odor threshold: pH-value: Change in condition Melting point/Melting range: Boiling point/Boiling range:	Not determined. Not applicable. Not determined Not determined				
Odor threshold: pH-value: Change in condition Melting point/Boiling range: Boiling point/Boiling range: Sublimation temperature / start: Flammability (solid, gaseous)	Not determined Not applicable. Not determined Not determined Not determined Not determined				
Odor threshold: pH-value: Change in condition Melting point/Melting range: Boiling point/Boiling range: Sublimation temperature / start: Flammability (solid, gaseous) Ignition temperature:	Not determined Not applicable. Not determined Not determined Not determined. Not determined.				
Odor threshold: pH-value: Change in condition Melting point/Melting range: Boiling point/Boiling range: Sublimation temperature / start: Flammability (solid, gaseous) Ignition temperature: Decomposition temperature:	Not determined. Not applicable. Not determined Not determined Not determined. Not determined. Not determined Not determined				
Odor threshold: pH-value: 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 applicable. Not determined Not determined Not determined. Not determined Not determined Not determined Not determined				
Odor threshold: pH-value: Change in condition Melting point/Melting range: Boiling point/Boiling range: Sublimation temperature / start: Flammability (solid, gaseous) Ignition temperature: Decomposition temperature: Auto igniting: Danger of explosion:	Not determined. Not applicable. Not determined Not determined Not determined. Not determined. Not determined Not determined				
Odor threshold: pH-value: Change in condition Melting point/Melting range: Boiling point/Boiling range: Sublimation temperature / start: Flammability (solid, gaseous) Ignition temperature: Decomposition temperature: Auto igniting: Danger of explosion: Explosion limits: Lower:	Not determined. Not applicable. Not determined Not determined Not determined. Not determined Not determined.				
Odor threshold: pH-value: Change in condition Melting point/Melting range: Boiling point/Boiling range: Sublimation temperature / start: Flammability (solid, gaseous) Ignition temperature: Decomposition temperature: Auto igniting: Danger of explosion: Explosion limits: Lower: Upper:	Not determined. Not applicable. Not determined Not determined Not determined. Not determined				
Odor threshold: pH-value: Change in condition Melting point/Melting range: Boiling point/Boiling range: Sublimation temperature / start: Flammability (solid, gaseous) Ignition temperature: Decomposition temperature: Auto igniting: Danger of explosion: Explosion limits: Lower: Upper: Vapor pressure:	Not determined. Not applicable. Not determined Not determined Not determined.				
Odor threshold: pH-value: Change in condition Melting point/Melting range: Boiling point/Boiling range: Sublimation temperature / start: Flammability (solid, gaseous) Ignition temperature: Decomposition temperature: Auto igniting: Danger of explosion: Explosion limits: Lower: Upper: Vapor pressure: Density: Relative density	Not determined. Not applicable. Not determined Not determined Not determined. Not determined				
Odor threshold: pH-value: Change in condition Melting point/Melting range: Boiling point/Boiling range: Subimation temperature / start: Flammability (solid, gaseous) Ignition temperature: Decomposition temperature: Auto igniting: Danger of explosion: Explosion limits: Lower: Upper: Vapor pressure: Density: Relative density Vapor density	Not determined. Not applicable. Not determined Not determined. Not applicable.				
Odor threshold: pH-value: Change in condition Melting point/Melting range: Boiling point/Boiling range: Sublimation temperature / start: Flammability (solid, gaseous) Ignition temperature: Decomposition temperature: Auto igniting: Danger of explosion: Explosion limits: Lower: Upper: Vapor pressure: Density: Relative density Vapor density Evaporation rate	Not determined. Not applicable. Not determined Not determined Not determined.				
Odor threshold: pH-value: Change in condition Melting point/Boiling range: Boiling point/Boiling range: Sublimation temperature / start: Flammability (solid, gaseous) Ignition temperature: Decomposition temperature: Auto igniting: Danger of explosion: Explosion limits: Lower: Upper: Vapor pressure: Density: Relative density Vapor density	Not determined. Not applicable. Not determined Not determined. Not applicable. Not applicable. Not applicable.				
Odor threshold: pH-value: Change in condition Melting point/Melting range: Boiling point/Boiling range: Sublimation temperature / start: Flammability (solid, gaseous) Ignition temperature: Decomposition temperature: Auto igniting: Danger of explosion: Explosion limits: Lower: Upper: Vapor pressure: Density: Relative density Vapor density Evaporation rate Solubility in / Miscibility with Water: Partition coefficient (n-octanol/water	Not determined. Not applicable. Not determined Not determined. Not determined. Not determined. Not determined. Not applicable. Not applicable. Not applicable. Not determined				
Odor threshold: pH-value: Change in condition Melting point/Melting range: Boiling point/Boiling range: Sublimation temperature / start: Flammability (solid, gaseous) Ignition temperature: Decomposition temperature: Auto igniting: Danger of explosion: Explosion limits: Upper: Vapor pressure: Density: Relative density Vapor density Evaporation rate Solubility in / Miscibility with Water: Partition coefficient (n-octanol/water, Viscosity:	Not determined. Not applicable. Not determined Not determined. Not applicable. Not determined.				
Odor threshold: pH-value: Change in condition Melting point/Melting range: Boiling point/Boiling range: Sublimation temperature / start: Flammability (solid, gaseous) Ignition temperature: Decomposition temperature: Auto igniting: Danger of explosion: Explosion limits: Upper: Vapor pressure: Density: Relative density Vapor density Evaporation rate Solubility in / Miscibility with Water: Partition coefficient (n-octanol/water, Viscosity:	Not determined. Not applicable. Not determined Not determined Not determined. Not applicable. Not determined. Not applicable. Not applicable. Not applicable.				
Odor threshold: pH-value: Change in condition Melting point/Melting range: Boiling point/Boiling range: Sublimation temperature / start: Flammability (solid, gaseous) Ignition temperature: Decomposition temperature: Auto igniting: Danger of explosion: Explosion limits: Lower: Upper: Vapor pressure: Density: Relative density Vapor density Evaporation rate Solubility in / Miscibility with Water: Partition coefficient (n-octanol/water	Not determined. Not applicable. Not determined Not determined. Not applicable. Not determined.				
Odor threshold: pH-value: Change in condition Melting point/Melting range: Boiling point/Boiling range: Sublimation temperature / start: Flammability (solid, gaseous) Ignition temperature: Decomposition temperature: Auto igniting: Danger of explosion: 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:	Not determined. Not applicable. Not determined Not determined. Not applicable. Not applicable. Not applicable. Not applicable.				
Odor threshold: pH-value: Change in condition Melting point/Melting range: Boiling point/Boiling range: Sublimation temperature / start: Flammability (solid, gaseous) Ignition temperature: Decomposition temperature: Auto igniting: Danger of explosion: Explosion limits: Lower: Upper: Vapor pressure: Density: Relative 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. Not applicable.				
Odor threshold: pH-value: Change in condition Melting point/Melting range: Boiling point/Boiling range: Sublimation temperature / start: Flammability (solid, gaseous) Ignition temperature: Decomposition temperature: Auto igniting: Danger of explosion: 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. Not applicable.				
Odor threshold: pH-value: Change in condition Melting point/Melting range: Boiling point/Boiling range: Sublimation temperature / start: Flammability (solid, gaseous) Ignition temperature: Decomposition temperature: Auto igniting: Danger of explosion: Explosion limits: Lower: Upper: Vapor pressure: Density: Relative density Vapor density Evapor density Evapor density Vapor density Evapor density Vapor density Evapor density Vapor density Outper: Outper: Vapor density Evapor ation rate Solubility in / Miscibility with Water: Partition coefficient (n-octanol/water, Viscosity: dynamic: kinematic: Other information 10 Stability and reactivity Reactivity No information known. Chemical stability Stable under recom	Not determined. Not determined Not determined Not determined. Not applicable. Not determined. Not applicable. Not applicable. No turther relevant information available. mended storage conditions.				
Odor threshold: pH-value: Change in condition Melting point/Melting range: Boiling point/Boiling range: Sublimation temperature / start: Flammability (solid, gaseous) Ignition temperature: Decomposition temperature: Auto igniting: Danger of explosion: 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 10 Stability and reactivity Reactivity No information known. Chemical stability Stable under recom Thermal decomposition / conditions	Not determined. Not determined Not determined. Not applicable. Not applicable. Not applicable. Not further relevant information available. mended storage conditions. to be avoided: Decomposition will not occur if used and stored according to specifications.				
Odor threshold: pH-value: Change in condition Melting point/Melting range: Boiling point/Boiling range: Sublimation temperature / start: Flammability (solid, gaseous) Ignition temperature: Decomposition temperature: Auto igniting: Danger of explosion: 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 10 Stability and reactivity Reactivity No information known. Chemical stability Stable under recom Thermal decomposition / conditions	Not determined. Not determined Not determined Not determined. Not applicable. Not determined. Not applicable. Not applicable. Not applicable. Not applicable. Not upplicable. Not upplicable. </th				
Odor threshold: pH-value: Change in condition Melting point/Melting range: Boiling point/Boiling range: Sublimation temperature / start: Flammability (solid, gaseous) Ignition temperature: Decomposition temperature: Auto igniting: Danger of explosion: 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 10 Stability and reactivity Reactivity No information known. Chemical stability Stable under recom Thermal decomposition / conditions	Not determined. Not determined Not determined Not determined. Not applicable. Not determined. Not applicable. Not applicable. Not applicable. Not applicable. Not upplicable. Not upplicable. </th				

Hazardous decomposition products: Carbon monoxide and carbon dioxide

(Contd. of page 1)

Product name: N-Methyl-D-phenylalanine

Page 3/4 Printing date 11/24/2015 Reviewed on 11/03/2015

Nitrogen oxides	(Contd. of page 2)			
11 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: May cause irritation Eye irritation or corrosion: May cause irritation Eye irritation or corrosion: May cause irritation Sensitization: No sensitizing effects known. Germ cell mutagenicity: No effects known. Carcinogenicity: No effects known. Carcinogenicity: No effects known. Specific target organ system toxicity - repeated exposure: No effects known. Specific target organ system toxicity - single exposure: No effects known. 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.				
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 Recommendation Consult state, local or national regulations to ensure proper disposal. Uncleaned packagings: Recommendation: Disposal must be made according to official regulations.				
14 Transport information				
UN-Number DOT, ADN, IMDG, IATA Not aj	pplicable			
UN proper shipping name DOT, ADN, IMDG, IATA Not ap	pplicable			
Transport hazard class(es) DOT, ADR, ADN, IMDG, IATA	pplicable			
Packing group	pircable			
DOT, IMĎG, IÁTA Not ap	pplicable			
· · · · · · · · · · · · · · · · · · ·	pplicablepplicable			
Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code Not ap				
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 Not applicable				
Hazard pictograms Not applicable Signal word Not applicable Hazard statements Not applicable National regulations This product is not listed in the U.S. Environmental Protection Agency Toxic Substances Control Act Chemical Substance Inventory. Use of this product is restricted to research and development only. This product must 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 or in formulations for commercial purposes. This product is not listed on the Canadian Domestic Substances List (DSL) or the Canadian Non-Domestic Substances List (NDSL). SAPA Society 212 (NDSL).				
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. 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.				
	USAUSA			

Product name: N-Methyl-D-phenylalanine

Page 4/4 Printing date 11/24/2015 Reviewed on 11/03/2015

(Contd. of page 3)

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 accoryms: 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 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 LD50: Lethal concentration, 50 percent LD50: Lethal concentration of Governmental Industrial Hygienists (USA) OSHA: Occupational Safety and Health Administration (USA) MTP: National Toxicology Program (USA) MARC: International Agency for Research on Cancer EPA: Environmental Protection Agency (USA)

USA