

SAFETY DATA SHEET

Conforms to the requirements of the:

United States Hazard Communication Regulation 29 CFR 1910.1200

SECTION 1: CHEMICAL PRODUCT and COMPANY IDENTIFICATION

PRODUCT NAME	FARMIN DM2098
PRODUCT CASRN	112-18-5
PRODUCT DESCRIPTION	TERTIARY FATTY AMINES
SDS DOCUMENT No.	K02135
RECOMMENDED USES	Product is intended for use as a raw material in chemical manufacturing

RESPONSIBLE PARTY

Kao Specialties Americas LLC
243 Woodbine Street
P. O. Box 2316
High Point, NC 27261
Telephone: 1-800-727-2214

Refer to SECTION 16 for information regarding the
MANUFACTURER(s) of this product

FOR ALL TRANSPORTATION ACCIDENTS, call Chemtrec at 1-800-424-9300 or +1-703-741-5970 for international collect calls (in Mexico, call 800-681-9531)

SECTION 2: HAZARD(S) IDENTIFICATION

PRODUCT CLASSIFICATION per 29 CFR 1910.1200

HAZARD CLASSIFICATION	Substance or mixture corrosive to metals Category 1 Skin Corrosion/Irritation Category 1B Serious Eye Damage/Eye Irritation Category 1 Acute Toxicity - Oral Category 4
SIGNAL WORD	Danger
HAZARD STATEMENTS	May be corrosive to metals Harmful if swallowed Causes severe skin burns and eye damage

HAZARD PICTOGRAMS



RECOMMENDED SAFETY PRECAUTIONS

INJURY PREVENTION	Keep only in original container. Do not breathe dust/fume/gas/mist/vapours/spray. Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Wear protective gloves/protective clothing/eye protection/face protection.
	IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell. IF SWALLOWED: rinse mouth. Do NOT induce vomiting. IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor. Absorb spillage to prevent material damage. Wash contaminated clothing before reuse.
PRODUCT STORAGE	Store locked up. Store in corrosive resistant container with a resistant inner liner.
PRODUCT DISPOSAL	Dispose of contents/container in accordance with local/regional/national/international regulation for hazardous wastes.

HAZARDS NOT OTHERWISE CLASSIFIED

PYROPHORIC GASES	Not applicable
SIMPLE ASPHYXIANTS	Not applicable
COMBUSTIBLE DUST	Not applicable

Dust Classification	Minimum Ignition Energy (mJ)	Pmax (bar-g)	Rmax (bar/s)	Kst (bar-m/s)	Explosion Severity
Not Applicable					

Definitions for dust classifications are found in OSHA Instruction CPL 03-00-008 *Combustible Dust National Emphasis Program (reissued) March 11, 2008, Appendix E, Section 5*

Other Known Hazards	None
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FOR INFORMATION REGARDING ENVIRONMENTAL GHS CLASSIFICATION, REFER TO SECTION 12 BELOW

SECTION 3: COMPOSITION/INFORMATION on INGREDIENTS

Chemical Name	Common Name	CAS Number	Concentration (%)
1-Dodecanamine, N,N-dimethyl-	Lauryl dimethylamine	112-18-5	~ 100
1-Decanamine, N,N-dimethyl-	Decyl dimethylamine	1120-24-7	0.05
1-Tetradecanamine, N,N-dimethyl-	Tetradecyl dimethylamine	112-75-4	0.05

If any items in the table above are described as CONFIDENTIAL, Kao Specialties Americas LLC considers this information to constitute a Trade Secret.

SECTION 4: FIRST-AID MEASURES

EYES	Flush immediately with water for at least 15 minutes. Do not rub eyes. Remove contact lens immediately, if present and easy to remove. SEEK IMMEDIATE MEDICAL ATTENTION ONCE THE EXPOSED PERSON IS SAFE TO TRANSPORT.
SKIN	Immediately take off all contaminated clothing. SEEK MEDICAL ATTENTION IMMEDIATELY. If medical attention is not immediately available, contact POISON CONTROL CENTER (1-800-222-1222). For small exposure, wash affected area with 2% acetic acid solution until the slimy feeling disappears. Follow acid wash with flushing the exposed area with copious amount of water. For large exposure, use safety shower to flush the affected area with heavy flow of water.
INGESTION	If the material is swallowed, get immediate medical attention or advice.
INHALATION	If inhaled, immediately remove the affected person to fresh air. If not breathing, give artificial respiration, preferably mouth-to-mouth. If breathing is difficult, give oxygen. If symptoms persist, get medical attention.
SYMPTOMS of EXPOSURE	Skin contact: exposure to this product will result in rash and irritation. Deep-tissue chemical burn will develop slowly over a period of hours if the material is not promptly removed from the affected area. Eyes: symptoms include itching, burning, redness and tearing. Respiratory: symptoms may include burning sensation in the upper respiratory system, shortness of breath, and choking/coughing.
NOTES to PHYSICIAN	Provide general supportive measures and treat symptomatically.

SECTION 5: FIRE-FIGHTING MEASURES

FLAMMABLE PROPERTIES	Refer to SECTION 9: Physical and Chemical Properties
HAZARDOUS PRODUCTS of COMBUSTION	Irritating and toxic gases or fumes may be released during a fire. Upon decomposition, this product may yield poisonous gases including oxides of nitrogen, hydrogen gas and ammonia.
PROPERTIES THAT COULD INCREASE FIRE or EXPLOSION HAZARD	Vapors can travel to a source of ignition and flash back.
EXTINGUISHING MEDIA	Powder, alcohol-resistant foam, CO2 & sand
FIRE-FIGHTING INSTRUCTIONS	Firefighters should wear full protective clothing including self contained breathing apparatus.

NFPA ratings are found in **SECTION 16**

SECTION 6: ACCIDENTAL RELEASE MEASURES

FOR ALL TRANSPORTATION ACCIDENTS, call Chemtrec at 1-800-424-9300 or +1-703-741-5970 for international collect calls (in Mexico, call 800-681-9531)

RESPONSE TO SMALL SPILLS OF PRODUCT

SPILL CONTAINMENT	Eliminate all sources of ignition or flammables that may come into contact with a spill of this material. Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible.
SPILL CLEANUP PROCEDURES	Wear appropriate protective equipment and clothing during clean-up. Ventilate the contaminated area. Absorb spill with inert material. Shovel material into appropriate container for disposal.
REQUIRED EQUIPMENT	Shovel the material into waste container.
ADDITIONAL INFORMATION	No other spill procedures necessary.

RESPONSE TO LARGE SPILLS OF PRODUCT

SPILL CONTAINMENT	Eliminate all sources of ignition or flammables that may come into contact with a spill of this material. Dike the spilled material, where this is possible. Stop source of leak if possible. Prevent liquid from entering sewers. Keep out of drains and water courses.
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SPILL CLEANUP PROCEDURES

Ventilate the contaminated area. Absorb spill with inert material. Shovel material into appropriate container for disposal. Wear appropriate protective equipment and clothing during clean-up. Thoroughly wash the area with water after a spill or leak clean-up. For very large spills, activate company or local HAZMAT emergency response. Use of properly trained remediation company may be required to safely collect the spilled product.

REQUIRED EQUIPMENT

No additional information on equipment.

ADDITIONAL INFORMATION

No other spill procedures necessary.

SECTION 7: HANDLING AND STORAGE**HANDLING REQUIREMENTS**

Use this product with adequate ventilation. Use a NIOSH-approved respirator if exposed to oil mist, and adequate ventilation is not available. Avoid getting this material into contact with your skin and eyes. Appropriate neutralizing solution should be immediately available whenever skin contact is possible (see SECTION 4: FIRST AID MEASURES). Keep away from sources of ignition.

STORAGE REQUIREMENTS

Eliminate all sources of ignition.
Keep the container tightly closed and in a cool, well-ventilated place.
Do not mix storage with incompatible materials. Store containers away from acids and strong oxidizing agents.
If product is stored in bulk, nitrogen padding is recommended.
Storage area should be protected by appropriately designed containment to prevent release to groundwater or sewers.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**ENGINEERING CONTROLS**

Provide adequate local exhaust ventilation to maintain worker exposure below exposure limits.

PERSONAL PROTECTIVE EQUIPMENT**EYE/FACE PROTECTION**

If handling procedure does not require respiratory protection, chemical splash goggles and full-face shield are recommended when handling this product.

HAND PROTECTION

Impervious gloves should be used at all times when handling this product.

SKIN PROTECTION

Use of protective coveralls and long sleeves is recommended. Impervious gloves should be used at all times when handling this product.

RESPIRATORY PROTECTION

A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements must be followed whenever there may be potential for airborne exposure.

OTHER

Eyewash fountains and emergency showers are required.

EXPOSURE LIMITS

CHEMICAL	CASRN	PERCENT	LIMITS	AGENCY
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OSHA: No exposure limits established for this product

ACGIH: No exposure limits established for this product

SECTION 9: PHYSICAL and CHEMICAL PROPERTIES**APPEARANCE @ 20°C**

Clear liquid

ODOR

Amine odor

ODOR THRESHOLD

No data available

pH

No data available

VAPOR DENSITY

No data available

VAPOR PRESSURE

300 Pa @ 104°C

EVAPORATION RATE

No data available

RELATIVE DENSITY

0.787 @ 20°C

MELTING POINT (°C)

-24°C

WATER SOLUBILITY

Insoluble in water

INITIAL BOILING POINT (°C)

272°C

BOILING RANGE (°C)

No data available

PARTITION COEFFICIENT (N-OCTANOL/WATER)	No data available	VISCOSITY	4mPa-s @ 20°C
DECOMPOSITION TEMPERATURE	No data available	FLAMMABILITY CLASSIFICATION	CLASS IIIB
FLASH POINT (°C)	130°C Cleveland Open Cup	AUTO-IGNITION TEMPERATURE	No data available
UPPER EXPLOSIVE LIMIT	No data available	LOWER EXPLOSIVE LIMIT	No data available
OTHER DATA	No data available		

SECTION 10: STABILITY and REACTIVITY

CHEMICAL STABILITY	Stable under normal conditions.
CONDITIONS to AVOID	Use suitable technology and/or best work practices to prevent or minimize air emissions of this product.
INCOMPATIBLE MATERIALS (Reactivity)	This product reacts with acids.
INCOMPATIBLE MATERIALS (Storage & Transport)	Avoid contact with acids, acid anhydrides, oxidizing agents, copper and copper alloys.
HAZARDOUS DECOMPOSITION PRODUCTS	None known.
HAZARDOUS POLYMERIZATION	Will not occur.

SECTION 11: TOXICOLOGICAL INFORMATION

ACUTE EFFECTS

ORAL (LD50)	Ingredient: Rat > 1200 mg/kg Ingredient: Rat : 740 mg/kg	(data on dodecylamine; source - OECD SIDS) (data on lauryldimethylamine; source - IUCLID)
COMMENT	Not applicable	
DERMAL (LD50)	Product: Rabbit > 5000 mg/kg	
COMMENT	Not applicable	
INHALATION (LC50)	Product: No data available for this product.	
COMMENT	Concentration of ingredients of unknown inhalation toxicity: 100 %	

OTHER TOXICOLOGICAL EFFECTS

SERIOUS EYE DAMAGE & IRRITATION	Product: No data available for this product.
SKIN CORROSION & IRRITATION	Product: No data available for this product.
SKIN SENSITIZATION	Product: No data available for this product.
RESPIRATORY SENSITIZATION	Product: No data available for this product.
MUTAGENICITY	Ames Test (TA98, TA100) Negative

REPRODUCTIVE TOXICITY – MATERNAL	Product: No data available for this product.
REPRODUCTIVE TOXICITY – FERTILITY	Product: No data available for this product.
REPRODUCTIVE TOXICITY – DEVELOPMENAL	Product: No data available for this product.
TERATOGENICITY	Product: No data available for this product.
STOT – SINGLE EXPOSURE	Product: No data available for this product.
STOT – REPEATED EXPOSURE	Product: No data available for this product.
ASPIRATION HAZARD	Product: No data available for this product.


CARCINOGENICITY

CHEMICAL NAME	DATA	AGENCY	LIST
None of the components of this product are listed on the OSHA Possible or Select Carcinogens Lists.			
None of the components of this product are listed on the ACGIH Carcinogens List.			
No limits established for this product by the International Agency for Research on Cancer (IARC).			
None of the components of this product are listed on the NTP Known or Suspected Carcinogens List.			

MEDICAL CONDITIONS AGGRAVATED by EXPOSURE	No information available.
ROUTES of ENTRY	Routes of entry for solids and liquids include eye and skin contact, ingestion and inhalation.

SECTION 12: ECOLOGICAL INFORMATION

UN GHS AQUATIC TOXICITY CLASSIFICATION INFORMATION

AQUATIC TOXICITY CLASSIFICATION	Acute 1 Chronic 1
SIGNAL WORD	Warning
HAZARD PICTOGRAM	
HAZARD STATEMENT	Very toxic to aquatic life Very toxic to aquatic life with long lasting effects
PREVENTION	Avoid release to the environment.
RESPONSE	Collect spillage.
DISPOSAL	Dispose of contents/container in accordance with local/regional/national/international regulation for hazardous wastes.

ADDITIONAL ENVIRONMENTAL INFORMATION

AQUATIC TOXICITY (fish)	96 hr LC50 Rainbow Trout = 0.57 mg/L 96 hr LC50 Zebrafish : 0.71 - 1 mg/L [static]
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AQUATIC TOXICITY (crustacean)	No information available
AQUATIC TOXICITY (algae)	No information available
AQUATIC TOXICITY (other data)	No information available
ECOTOXICITY INFORMATION	None determined
ENVIRONMENTAL FATE	This product is Readily Biodegradable.
BIOLOGICAL OXYGEN DEMAND (BOD5), g/g	0.82 g/g
CHEMICAL OXYGEN DEMAND (COD), g/g	2.03 g/g
PERSISTENCE & DEGRADABILITY	CO2 evolution test (OECD301B) : 72 % (28 days)
BIOACCUMULATION	No information available.



SECTION 13: DISPOSAL CONSIDERATIONS

WASTE DESCRIPTION	Wastes must be tested using methods described in 40 CFR Part 261 to determine if it meets applicable definitions of hazardous wastes.
GENERAL DISPOSAL CONSIDERATIONS	Clean up and dispose of waste in accordance with all federal, state, and local environmental regulations.
DISPOSAL of EMPTY CONTAINERS	Dispose of waste material according to Local, State, Federal, and Provincial Environmental Regulations.

RCRA COMPONENT	CASRN	DATA
No limits established for this product.		

SECTION 14: TRANSPORT INFORMATION

US DOT CLASSIFICATION (49 CFR §172.101)

UN NUMBER	UN PROPER SHIPPING NAME	TECHNICAL NAME	HAZARD CLASS	PACKING GROUP	SHIPPING PLACARD
UN2735	Amines, liquid, corrosive, n.o.s.	containing Alkyl(C12-C14) dimethylamines	8	II	 

MARINE POLLUTANT	This material is a MARINE POLLUTANT. The marine pollutant mark is not required when transported on inland waterways in sizes of ≤5 L or ≤5 kg or by road, rail, or inland air in non-bulk sizes. See 49 CFR 171.4 for more information about these exemptions.
SPECIAL PROVISIONS (§172.102)	B2, IB2, T11, TP1, TP27
PACKAGING, BULK (§173.***)	242
PACKAGING, NON-BULK (§173.***)	202
PACKAGING,	154

EXCEPTIONS (§173.***)	
QUANTITY LIMITATION, PASSENGER AIR/RAIL	1 L
QUANTITY LIMITATION, CARGO AIR	30 L
VESSEL STOWAGE, GENERAL	Material may be stowed "on deck" or "under deck" on a cargo vessel or on a passenger vessel.
VESSEL STOWAGE SPECIAL	Stow "separated from" acids.
REPORTABLE QUANTITY (RQ)	No reportable quantity for this product
EMERGENCY RESPONSE GUIDEBOOK (ERG) REFERENCE	153

INTERNATIONAL BULK SHIPPING REQUIREMENTS (MARPOL 73/78)

SHIPPING NAME	No information available
SHIP TYPE	No information available
POLLUTION CATEGORY	No information available

OTHER REGULATORY CLASSIFICATION INFORMATION

	IATA	IMDG
PROPER SHIPPING NAME	Amines, liquid, corrosive, n.o.s.	Amines, liquid, corrosive, n.o.s.
TECHNICAL NAME	containing Alkyl(C12-C14) dimethylamines	containing Alkyl(C12-C14) dimethylamines
UN NUMBER	UN2735	UN2735
HAZARD CLASS	8	8
PACKING GROUP	II	II

SECTION 15: REGULATORY INFORMATION

TOXIC SUBSTANCES CONTROL ACT (TSCA)	This product is listed on the U.S. EPA TSCA Inventory.
TSCA 12b EXPORT NOTIFICATION (US)	This product is not subject to TSCA 12B Export Notification requirements. ()
SIGNIFICANT NEW USE RULE (US)	This material is not subject to a Significant New Use Rule under the US Toxic Substances Control Act.
TSCA 8b INVENTORY RESET STATUS (US)	All substances present in this product have been designated as commercially ACTIVE on the United States TSCA inventory {15 U.S.C. §2607(b)(4)}
DOMESTIC SUBSTANCE LIST (DSL - CA)	All components are listed on the Domestic Substances List (DSL) or are exempt from the requirements to notify.
HAZARDOUS MATERIALS INFORMATION REVIEW ACT (CA)	This product does not contain any materials for which a Confidential Business Information claim has been filed with Health Canada. Filing Date: Not applicable Reference Number: Not applicable
SIGNIFICANT NEW USE ACTIVITIES (CA)	The product contains no regulated components
NATIONAL INVENTORY of CHEMICAL SUBSTANCES (MX)	All components are listed on the National Inventory of Chemical Substances (INSQ) or are exempt from the requirements to notify.

INTERNATIONAL CHEMICAL INVENTORIES

All of the components of this product are listed on the following inventories:

ENCS	Japan	Yes	Registry No. 2-176
REACH	Europe	Yes	Intermediate
EINECS	Europe	Yes	Registry No. 203-943-8
ELINCS	Europe	No	
IECSC	China	Yes	
PICCS	Philippines	Yes	
ECL	Korea	Yes	Registry No. KE-11504
AICS	Australia	Yes	
TCSI	Taiwan	Yes	

APPLICABLE UNITED STATES FEDERAL and STATE REGULATIONS

EMERGENCY PLANNING and COMMUNITY RIGHT TO KNOW ACT (EPCRA) 40 CFR PART 355, APPENDIX A

EHS COMPONENTS	CASRN	PERCENT	TPQ POUNDS and RQ
The product contains no regulated components			

313 COMPONENTS	CASRN	PERCENT	REPORTING LIMIT
The product contains no regulated components			

CERCLA/SARA COMPONENTS	CASRN	PERCENT	REPORTING LIMIT
The product contains no regulated components			

EPCRA SECTION 311/312 CLASSIFICATION	ACUTE	Yes
	CHRONIC	No
	FIRE	No
	PRESSURE	No
	REACTIVE	No

THE FOLLOWING COMPONENTS ARE IDENTIFIED UNDER THE US CLEAN AIR ACT HON-RULE FOR SOCM I CHEMICALS

COMPONENT NAME	CASRN
The product contains no regulated components	

THE FOLLOWING COMPONENTS ARE IDENTIFIED UNDER THE US CLEAN AIR ACT (VOCs IN SOCM I CHEMICALS)

COMPONENT NAME	CASRN
The product contains no regulated components	

THE FOLLOWING COMPONENTS ARE IDENTIFIED UNDER THE US CLEAN AIR ACT AS HAZARDOUS AIR POLLUTANTS (HAP)

COMPONENT NAME	CASRN
The product contains no regulated components	

THE FOLLOWING COMPONENTS ARE IDENTIFIED UNDER THE US CLEAN AIR ACT NON-RULE HAZARDOUS AIR POLLUTANTS (HAP)

COMPONENT NAME	CASRN
The product contains no regulated components	

THE FOLLOWING COMPONENTS ARE IDENTIFIED UNDER THE US CLEAN WATER ACT

COMPONENT NAME	CASRN	LIST NAME
No limits established for this product.		

STATE RIGHT-TO-KNOW INFORMATION

COMPONENT NAME	CASRN	STATE	List Name
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If the STATE RIGHT-TO-KNOW INFORMATION table above is empty than none of the components of this product are included on the state right-to-know regulatory lists for Florida, Massachusetts, Michigan, Pennsylvania, or New Jersey.

CALIFORNIA SAFE WATER and TOXIC ENFORCEMENT ACT of 1986 (Proposition 65)

COMPONENT NAME	CASRN	CONCENTRATION ^F	LIST DATA
This product contains no components which are listed on California's Proposition 65 lists.			

SECTION 16: OTHER INFORMATION

To the best of the manufacturer's knowledge, the information contained herein is accurate. However, neither the manufacturer, nor any of its affiliates, make any representations or warranties (expressed or implied), nor assumes any liability (including liability for any direct, incidental, consequential, or other damages) with respect to the accuracy or completeness of the information contained herein. Such information may be (without limitation) invalid if the specified material is used in combination with another, in a particular process, or under unusual conditions. Determination of suitability of any material for any given purpose is the sole responsibility of the user who assumes all risk and responsibility therefore. All materials may present unknown hazards and should be used with appropriate caution. The manufacturer cannot and does not guarantee that the hazards described herein are the only ones that exist.

SDS GENERATED BY	PSIMCOX
SDS VERSION DATE	11/3/2021 8:56:22 AM
SDS APPROVED BY	Patrick B. Simcox Manager – Health, Safety, & Environmental e-mail: Patrick.Simcox@kao.com
MANUFACTURER(S)	PILIPINAS KAO, INC. Jasaan Misamis Oriental Ecozone 9003 Jasaan, Mis. Or.

P.O. Box 15
Cagayan de Oro City PHILIPPINES
Telephone: 63-88-890-5020

NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) HAZARD RATINGS

HEALTH	3
FLAMMABILITY	1
REACTIVITY	0

Hazardous Material Identification System (HMIS) Hazard Ratings

HEALTH	3
FLAMMABILITY	1
REACTIVITY	0
PERSONAL PROTECTION	D

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