

SAFETY DATA SHEET

Fiehn GC/MS Metabolomics Standards Kit, Part Number 400505

Section 1. Identification

1.1 Product identifier

Product name	: Fiehn GC/MS Metabolomics Standards Kit, Part Number 400505
Part no. (chemical kit)	: 400505
Part no.	: Pyridine 400505-52 FAMES/d27-Myristic Acid Mixture 400505-51 MSTFA/1% TMCS 400505-53 d27-Myristic Acid 0.75 mg/mL 400505-54
Validation date	: 8/3/2023

1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses	: Reagents and Standards for Analytical Chemistry Laboratory Use
	Pyridine 1 x 0.5 ml FAMES/d27-Myristic Acid Mixture 1 x 0.5 ml MSTFA/1% TMCS 1 x 0.5 ml d27-Myristic Acid 0.75 mg/mL 4 x 1.2 ml

1.3 Details of the supplier of the safety data sheet

Supplier/Manufacturer	: Agilent Technologies, Inc. 5301 Stevens Creek Blvd Santa Clara, CA 95051, USA 800-227-9770
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1.4 Emergency telephone number

In case of emergency	: CHEMTREC®: 1-800-424-9300
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Section 2. Hazards identification

2.1 Classification of the substance or mixture

OSHA/HCS status	: Pyridine	This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
	FAMES/d27-Myristic Acid Mixture	This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
	MSTFA/1% TMCS	This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
	d27-Myristic Acid 0.75 mg/mL	This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Classification of the substance or mixture

Pyridine

H225	FLAMMABLE LIQUIDS - Category 2
H302	ACUTE TOXICITY (oral) - Category 4
H312	ACUTE TOXICITY (dermal) - Category 4
H332	ACUTE TOXICITY (inhalation) - Category 4
H319	EYE IRRITATION - Category 2A
H351	CARCINOGENICITY - Category 2
H336	SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3

FAMES/d27-Myristic Acid Mixture

H225	FLAMMABLE LIQUIDS - Category 2
H315	SKIN IRRITATION - Category 2

Section 2. Hazards identification

H320	EYE IRRITATION - Category 2B
H361	TOXIC TO REPRODUCTION - Category 2
H335	SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3
H336	SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3
H373	SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2
H304	ASPIRATION HAZARD - Category 1
H411	AQUATIC HAZARD (LONG-TERM) - Category 2

MSTFA/1% TMCS

H225	FLAMMABLE LIQUIDS - Category 3
H301	ACUTE TOXICITY (oral) - Category 3
H312	ACUTE TOXICITY (dermal) - Category 4
H331	ACUTE TOXICITY (inhalation) - Category 3
H315	SKIN IRRITATION - Category 2
H319	EYE IRRITATION - Category 2A

d27-Myristic Acid 0.75 mg/mL

H225	FLAMMABLE LIQUIDS - Category 2
H315	SKIN IRRITATION - Category 2
H320	EYE IRRITATION - Category 2B
H361	TOXIC TO REPRODUCTION - Category 2
H335	SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3
H336	SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3
H373	SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2
H304	ASPIRATION HAZARD - Category 1
H411	AQUATIC HAZARD (LONG-TERM) - Category 2

Ingredients of unknown toxicity	: MSTFA/1% TMCS	Percentage of the mixture consisting of ingredient (s) of unknown acute dermal toxicity: > 60%
		Percentage of the mixture consisting of ingredient (s) of unknown acute inhalation toxicity: > 60%
		Percentage of the mixture consisting of ingredient (s) of unknown acute oral toxicity: > 60%
	MSTFA/1% TMCS	Percentage of the mixture consisting of ingredient (s) of unknown hazards to the aquatic environment: 100%

[2.2 GHS label elements](#)

Section 2. Hazards identification

Hazard pictograms

: Pyridine



FAMEs/d27-Myristic Acid Mixture



MSTFA/1% TMCS



d27-Myristic Acid 0.75 mg/mL



Signal word

: Pyridine
FAMEs/d27-Myristic Acid Mixture
MSTFA/1% TMCS
d27-Myristic Acid 0.75 mg/mL

Danger
Danger
Danger
Danger

Hazard statements

: Pyridine

H225 - Highly flammable liquid and vapor.
H302 + H312 + H332 - Harmful if swallowed, in contact with skin or if inhaled.
H319 - Causes serious eye irritation.
H336 - May cause drowsiness or dizziness.
H351 - Suspected of causing cancer.

FAMEs/d27-Myristic Acid Mixture

H225 - Highly flammable liquid and vapor.
H304 - May be fatal if swallowed and enters airways.
H315 + H320 - Causes skin and eye irritation.
H335 - May cause respiratory irritation.
H336 - May cause drowsiness or dizziness.
H361 - Suspected of damaging fertility or the unborn child.

MSTFA/1% TMCS

H373 - May cause damage to organs through prolonged or repeated exposure.
H411 - Toxic to aquatic life with long lasting effects.
H226 - Flammable liquid and vapor.
H301 + H331 - Toxic if swallowed or if inhaled.
H312 - Harmful in contact with skin.
H315 - Causes skin irritation.

d27-Myristic Acid 0.75 mg/mL

H319 - Causes serious eye irritation.
H225 - Highly flammable liquid and vapor.
H304 - May be fatal if swallowed and enters airways.
H315 + H320 - Causes skin and eye irritation.
H335 - May cause respiratory irritation.
H336 - May cause drowsiness or dizziness.
H361 - Suspected of damaging fertility or the unborn child.
H373 - May cause damage to organs through prolonged or repeated exposure.
H411 - Toxic to aquatic life with long lasting effects.

Precautionary statements

Section 2. Hazards identification

Prevention

: Pyridine

P201 - Obtain special instructions before use.
 P280 - Wear protective gloves, protective clothing and eye or face protection.
 P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
 P241 - Use explosion-proof electrical, ventilating or lighting equipment.
 P242 - Use non-sparking tools.
 P243 - Take action to prevent static discharges.
 P261 - Avoid breathing vapor.
 P270 - Do not eat, drink or smoke when using this product.
 P264 - Wash thoroughly after handling.

FAMES/d27-Myristic Acid Mixture
 P201 - Obtain special instructions before use.
 P280 - Wear protective gloves, protective clothing and eye or face protection.
 P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
 P241 - Use explosion-proof electrical, ventilating or lighting equipment.
 P242 - Use non-sparking tools.
 P243 - Take action to prevent static discharges.
 P273 - Avoid release to the environment.
 P260 - Do not breathe vapor.
 P264 - Wash thoroughly after handling.

MSTFA/1% TMCS
 P280 - Wear protective gloves and protective clothing. Wear eye or face protection.
 P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
 P241 - Use explosion-proof electrical, ventilating or lighting equipment.
 P242 - Use non-sparking tools.
 P243 - Take action to prevent static discharges.
 P261 - Avoid breathing vapor.
 P270 - Do not eat, drink or smoke when using this product.

d27-Myristic Acid 0.75 mg/mL
 P264 - Wash thoroughly after handling.
 P201 - Obtain special instructions before use.
 P280 - Wear protective gloves, protective clothing and eye or face protection.
 P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
 P241 - Use explosion-proof electrical, ventilating or lighting equipment.
 P242 - Use non-sparking tools.
 P243 - Take action to prevent static discharges.
 P273 - Avoid release to the environment.
 P260 - Do not breathe vapor.
 P264 - Wash thoroughly after handling.

Section 2. Hazards identification

Response

: Pyridine

P308 + P313 - IF exposed or concerned: Get medical advice or attention.
 P304 + P312 - IF INHALED: Call a POISON CENTER or doctor if you feel unwell.
 P302 + P312 - IF ON SKIN: Call a POISON CENTER or doctor if you feel unwell.
 P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 P337 + P313 - If eye irritation persists: Get medical advice or attention.
 P391 - Collect spillage.

P308 + P313 - IF exposed or concerned: Get medical advice or attention.
 P304 + P312 - IF INHALED: Call a POISON CENTER or doctor if you feel unwell.
 P301 + P310, P331 - IF SWALLOWED: Immediately call a POISON CENTER or doctor. Do NOT induce vomiting.
 P362 + P364 - Take off contaminated clothing and wash it before reuse.
 P302 + P352 - IF ON SKIN: Wash with plenty of water.
 P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 P337 + P313 - If eye irritation persists: Get medical advice or attention.
 P304 + P340, P311 - IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor.
 P301 + P310 - IF SWALLOWED: Immediately call a POISON CENTER or doctor.
 P362 + P364 - Take off contaminated clothing and wash it before reuse.
 P302 + P312, P352 - IF ON SKIN: Call a POISON CENTER or doctor if you feel unwell. Wash with plenty of water.
 P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 P337 + P313 - If eye irritation persists: Get medical advice or attention.
 P391 - Collect spillage.


P308 + P313 - IF exposed or concerned: Get medical advice or attention.
 P304 + P312 - IF INHALED: Call a POISON CENTER or doctor if you feel unwell.
 P301 + P310, P331 - IF SWALLOWED: Immediately call a POISON CENTER or doctor. Do NOT induce vomiting.
 P362 + P364 - Take off contaminated clothing and wash it before reuse.
 P302 + P352 - IF ON SKIN: Wash with plenty of water.
 P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove

FAMES/d27-Myristic Acid Mixture

MSTFA/1% TMCS


d27-Myristic Acid 0.75 mg/mL

Section 2. Hazards identification

Storage	:  Pyridine	contact lenses, if present and easy to do. Continue rinsing. P337 + P313 - If eye irritation persists: Get medical advice or attention. P403 + P233 - Store in a well-ventilated place. Keep container tightly closed. P403 + P235 - Keep cool.
	FAMEs/d27-Myristic Acid Mixture	P403 + P233 - Store in a well-ventilated place. Keep container tightly closed. P403 + P235 - Keep cool.
	MSTFA/1% TMCS	P403 + P235 - Store in a well-ventilated place. Keep cool.
	d27-Myristic Acid 0.75 mg/mL	P403 + P233 - Store in a well-ventilated place. Keep container tightly closed. P403 + P235 - Keep cool.
Disposal	: Pyridine	P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.
	FAMEs/d27-Myristic Acid Mixture	P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.
	MSTFA/1% TMCS	P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.
	d27-Myristic Acid 0.75 mg/mL	P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.
Supplemental label elements	: Pyridine	None known.
	FAMEs/d27-Myristic Acid Mixture	None known.
	MSTFA/1% TMCS	Keep container tightly closed. Do not breathe vapor or spray. Use only with adequate ventilation.
	d27-Myristic Acid 0.75 mg/mL	None known.
2.3 Other hazards		
Hazards not otherwise classified	: Pyridine	None known.
	FAMEs/d27-Myristic Acid Mixture	None known.
	MSTFA/1% TMCS	Causes respiratory tract burns.
	d27-Myristic Acid 0.75 mg/mL	None known.

Section 3. Composition/information on ingredients

Substance/mixture	: Pyridine	Substance
	FAMEs/d27-Myristic Acid Mixture	Mixture
	MSTFA/1% TMCS	Mixture
	d27-Myristic Acid 0.75 mg/mL	Mixture

Ingredient name	%	CAS number
 Pyridine		
Pyridine	100	110-86-1
FAMEs/d27-Myristic Acid Mixture		
n-Hexane	≥90	110-54-3
MSTFA/1% TMCS		
N-Methyl-N-(trimethylsilyl)trifluoroacetamide	≥90	24589-78-4

Section 3. Composition/information on ingredients

Chlorotrimethylsilane	≤1.5	75-77-4
d27-Myristic Acid 0.75 mg/mL		
n-Hexane	≥90	110-54-3

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

4.1 Description of necessary first aid measures

Eye contact

: Pyridine

Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.

FAMEs/d27-Myristic Acid Mixture

Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.

MSTFA/1% TMCS

Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.

d27-Myristic Acid 0.75 mg/mL

Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.

Inhalation

: Pyridine

Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If necessary, call a poison center or physician. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

FAMEs/d27-Myristic Acid Mixture

Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest

Section 4. First aid measures

occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If necessary, call a poison center or physician. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

MSTFA/1% TMCS

Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If necessary, call a poison center or physician. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

d27-Myristic Acid 0.75 mg/mL

Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If necessary, call a poison center or physician. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Skin contact

: Pyridine

Wash with plenty of soap and water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Get medical attention. If necessary, call a poison center or physician. Wash clothing before reuse. Clean shoes thoroughly before reuse.

FAMEs/d27-Myristic Acid Mixture

Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Continue to rinse for at least 10 minutes. Get medical attention. Wash clothing before reuse. Clean shoes thoroughly before reuse.

MSTFA/1% TMCS

Wash with plenty of soap and water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Get medical attention. If

Section 4. First aid measures

	d27-Myristic Acid 0.75 mg/mL	<p>necessary, call a poison center or physician. Wash clothing before reuse. Clean shoes thoroughly before reuse.</p> <p>Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Continue to rinse for at least 10 minutes. Get medical attention. Wash clothing before reuse. Clean shoes thoroughly before reuse.</p>
Ingestion	:  Pyridine	<p>Wash out mouth with water. Remove dentures if any. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention. If necessary, call a poison center or physician. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention immediately. Call a poison center or physician. Wash out mouth with water. Remove dentures if any. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Aspiration hazard if swallowed. Can enter lungs and cause damage. Do not induce vomiting. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.</p>
	FAMEs/d27-Myristic Acid Mixture	<p>Get medical attention immediately. Call a poison center or physician. Wash out mouth with water. Remove dentures if any. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.</p>
	MSTFA/1% TMCS	<p>Get medical attention immediately. Call a poison center or physician. Wash out mouth with water. Remove dentures if any. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.</p>
	d27-Myristic Acid 0.75 mg/mL	<p>Get medical attention immediately. Call a poison center or physician. Wash out mouth with water. Remove dentures if any. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Aspiration hazard if swallowed. Can enter lungs and cause damage. Do not induce vomiting. If vomiting occurs, the head should be</p>

Section 4. First aid measures

kept low so that vomit does not enter the lungs. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

4.2 Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact	:	Pyridine	Causes serious eye irritation.
	:	FAMES/d27-Myristic Acid Mixture	Causes eye irritation.
	:	MSTFA/1% TMCS	Causes serious eye irritation.
	:	d27-Myristic Acid 0.75 mg/mL	Causes eye irritation.
Inhalation	:	Pyridine	Harmful if inhaled. Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness.
	:	FAMES/d27-Myristic Acid Mixture	Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness. May cause respiratory irritation.
	:	MSTFA/1% TMCS	Toxic if inhaled. Corrosive to the respiratory system.
	:	d27-Myristic Acid 0.75 mg/mL	Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness. May cause respiratory irritation.
Skin contact	:	Pyridine	Harmful in contact with skin.
	:	FAMES/d27-Myristic Acid Mixture	Causes skin irritation.
	:	MSTFA/1% TMCS	Harmful in contact with skin. Causes skin irritation.
	:	d27-Myristic Acid 0.75 mg/mL	Causes skin irritation.
Ingestion	:	Pyridine	Harmful if swallowed. Can cause central nervous system (CNS) depression.
	:	FAMES/d27-Myristic Acid Mixture	Can cause central nervous system (CNS) depression. May be fatal if swallowed and enters airways.
	:	MSTFA/1% TMCS	Toxic if swallowed. May cause burns to mouth, throat and stomach.
	:	d27-Myristic Acid 0.75 mg/mL	Can cause central nervous system (CNS) depression. May be fatal if swallowed and enters airways.

Over-exposure signs/symptoms

Eye contact	:	Pyridine	Adverse symptoms may include the following: pain or irritation watering redness
	:	FAMES/d27-Myristic Acid Mixture	Adverse symptoms may include the following: pain or irritation watering redness
	:	MSTFA/1% TMCS	Adverse symptoms may include the following: pain or irritation watering redness
	:	d27-Myristic Acid 0.75 mg/mL	Adverse symptoms may include the following: pain or irritation watering redness

Section 4. First aid measures

Inhalation

: Pyridine

Adverse symptoms may include the following:

nausea or vomiting
headache
drowsiness/fatigue
dizziness/vertigo
unconsciousness

FAMEs/d27-Myristic Acid Mixture

Adverse symptoms may include the following:

respiratory tract irritation
coughing
nausea or vomiting
headache
drowsiness/fatigue
dizziness/vertigo
unconsciousness

MSTFA/1% TMCS

Adverse symptoms may include the following:

respiratory tract irritation
coughing

d27-Myristic Acid 0.75 mg/mL

Adverse symptoms may include the following:

respiratory tract irritation
coughing
nausea or vomiting
headache
drowsiness/fatigue
dizziness/vertigo
unconsciousness
reduced fetal weight
increase in fetal deaths
skeletal malformations

Skin contact

: Pyridine

No specific data.

FAMEs/d27-Myristic Acid Mixture

Adverse symptoms may include the following:

irritation
redness
reduced fetal weight
increase in fetal deaths
skeletal malformations

MSTFA/1% TMCS

Adverse symptoms may include the following:

irritation
redness

d27-Myristic Acid 0.75 mg/mL

Adverse symptoms may include the following:

irritation
redness
reduced fetal weight
increase in fetal deaths
skeletal malformations

Ingestion

: Pyridine

No specific data.

FAMEs/d27-Myristic Acid Mixture

Adverse symptoms may include the following:

nausea or vomiting
reduced fetal weight
increase in fetal deaths
skeletal malformations

MSTFA/1% TMCS

No specific data.

d27-Myristic Acid 0.75 mg/mL

Adverse symptoms may include the following:

nausea or vomiting
reduced fetal weight
increase in fetal deaths
skeletal malformations

Section 4. First aid measures

4.3 Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician	: Pyridine	In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
	FAMEs/d27-Myristic Acid Mixture	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	MSTFA/1% TMCS	In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
	d27-Myristic Acid 0.75 mg/mL	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
Specific treatments	: Pyridine	No specific treatment.
	FAMEs/d27-Myristic Acid Mixture	No specific treatment.
	MSTFA/1% TMCS	No specific treatment.
	d27-Myristic Acid 0.75 mg/mL	No specific treatment.
Protection of first-aiders	: Pyridine	No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.
	FAMEs/d27-Myristic Acid Mixture	No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.
	MSTFA/1% TMCS	No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.
	d27-Myristic Acid 0.75 mg/mL	No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

5.1 Extinguishing media

Suitable extinguishing media	: Pyridine	Use dry chemical, CO ₂ , water spray (fog) or foam.
	FAMES/d27-Myristic Acid Mixture	Use dry chemical, CO ₂ , water spray (fog) or foam.
	MSTFA/1% TMCS	Use dry chemical, CO ₂ , water spray (fog) or foam.
	d27-Myristic Acid 0.75 mg/mL	Use dry chemical, CO ₂ , water spray (fog) or foam.
Unsuitable extinguishing media	: Pyridine	Do not use water jet.
	FAMES/d27-Myristic Acid Mixture	Do not use water jet.
	MSTFA/1% TMCS	Do not use water jet.
	d27-Myristic Acid 0.75 mg/mL	Do not use water jet.

5.2 Special hazards arising from the substance or mixture

Specific hazards arising from the chemical	: Pyridine	Highly flammable liquid and vapor. Runoff to sewer may create fire or explosion hazard. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. The vapor/gas is heavier than air and will spread along the ground. Vapors may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back.
	FAMES/d27-Myristic Acid Mixture	Highly flammable liquid and vapor. Runoff to sewer may create fire or explosion hazard. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. The vapor/gas is heavier than air and will spread along the ground. Vapors may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back. This material is toxic to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.
	MSTFA/1% TMCS	Flammable liquid and vapor. Runoff to sewer may create fire or explosion hazard. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. The vapor/gas is heavier than air and will spread along the ground. Vapors may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back.
	d27-Myristic Acid 0.75 mg/mL	Highly flammable liquid and vapor. Runoff to sewer may create fire or explosion hazard. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. The vapor/gas is heavier than air and will spread along the ground. Vapors may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back. This material is toxic to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.

Section 5. Fire-fighting measures

Hazardous thermal decomposition products

: Pyridine

Decomposition products may include the following materials:

carbon dioxide
carbon monoxide
nitrogen oxides

FAMEs/d27-Myristic Acid Mixture

Decomposition products may include the following materials:

carbon dioxide
carbon monoxide

MSTFA/1% TMCS

Decomposition products may include the following materials:

carbon dioxide
carbon monoxide
nitrogen oxides
halogenated compounds
carbonyl halides
metal oxide/oxides

d27-Myristic Acid 0.75 mg/mL

Decomposition products may include the following materials:

carbon dioxide
carbon monoxide

5.3 Advice for firefighters

Special protective actions for fire-fighters

: Pyridine

Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

FAMEs/d27-Myristic Acid Mixture

Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

MSTFA/1% TMCS

Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

d27-Myristic Acid 0.75 mg/mL

Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

Special protective equipment for fire-fighters

: Pyridine

Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

FAMEs/d27-Myristic Acid Mixture

Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

MSTFA/1% TMCS

Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 5. Fire-fighting measures

d27-Myristic Acid 0.75 mg/mL

Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

: Pyridine

No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

FAMEs/d27-Myristic Acid Mixture

No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

MSTFA/1% TMCS

No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Do not breathe vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

d27-Myristic Acid 0.75 mg/mL

No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders : Pyridine

FAMEs/d27-Myristic Acid Mixture

If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel". If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel". If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

MSTFA/1% TMCS

Section 6. Accidental release measures

d27-Myristic Acid 0.75 mg/mL		If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
6.2 Environmental precautions	: Pyridine	
FAMES/d27-Myristic Acid Mixture		Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
MSTFA/1% TMCS		Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities. Collect spillage.
d27-Myristic Acid 0.75 mg/mL		Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities. Collect spillage.

6.3 Methods and materials for containment and cleaning up

Methods for cleaning up	: Pyridine	
FAMES/d27-Myristic Acid Mixture		Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
MSTFA/1% TMCS		Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
d27-Myristic Acid 0.75 mg/mL		Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Section 7. Handling and storage

7.1 Precautions for safe handling

Protective measures

: Pyridine

Put on appropriate personal protective equipment (see Section 8). Avoid exposure - obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not ingest. Avoid breathing vapor or mist. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Take precautionary measures against electrostatic discharges. Empty containers retain product residue and can be hazardous. Do not reuse container.

FAMES/d27-Myristic Acid Mixture

Put on appropriate personal protective equipment (see Section 8). Avoid exposure - obtain special instructions before use. Avoid exposure during pregnancy. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not swallow. Avoid release to the environment. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Take precautionary measures against electrostatic discharges. Empty containers retain product residue and can be hazardous. Do not reuse container.

MSTFA/1% TMCS

Put on appropriate personal protective equipment (see Section 8). Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not ingest. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Take precautionary measures against electrostatic discharges. Empty containers retain product residue and can be hazardous. Do not reuse container.

Section 7. Handling and storage

	d27-Myristic Acid 0.75 mg/mL	Put on appropriate personal protective equipment (see Section 8). Avoid exposure - obtain special instructions before use. Avoid exposure during pregnancy. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not swallow. Avoid release to the environment. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Take precautionary measures against electrostatic discharges. Empty containers retain product residue and can be hazardous. Do not reuse container.
Advice on general occupational hygiene	: Pyridine	Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
	FAMEs/d27-Myristic Acid Mixture	Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
	MSTFA/1% TMCS	Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
	d27-Myristic Acid 0.75 mg/mL	Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
7.2 Conditions for safe storage, including any incompatibilities	: Pyridine	Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for

Section 7. Handling and storage

FAMES/d27-Myristic Acid Mixture

MSTFA/1% TMCS

d27-Myristic Acid 0.75 mg/mL

use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use. Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use. Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use. Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

7.3 Specific end use(s)

Recommendations

: Pyridine	Industrial applications, Professional applications.
FAMES/d27-Myristic Acid Mixture	Industrial applications, Professional applications.
MSTFA/1% TMCS	Industrial applications, Professional applications.
d27-Myristic Acid 0.75 mg/mL	Industrial applications, Professional applications.

Industrial sector specific solutions

: Pyridine	Not available.
FAMES/d27-Myristic Acid Mixture	Not available.
MSTFA/1% TMCS	Not available.
d27-Myristic Acid 0.75 mg/mL	Not available.

Section 8. Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
Pyridine Pyridine	ACGIH TLV (United States, 1/2022). TWA: 1 ppm 8 hours. OSHA PEL 1989 (United States, 3/1989). TWA: 5 ppm 8 hours. TWA: 15 mg/m ³ 8 hours. NIOSH REL (United States, 10/2020). TWA: 5 ppm 10 hours. TWA: 15 mg/m ³ 10 hours. OSHA PEL (United States, 5/2018). TWA: 5 ppm 8 hours. TWA: 15 mg/m ³ 8 hours. CAL OSHA PEL (United States, 5/2018). TWA: 15 mg/m ³ 8 hours. TWA: 5 ppm 8 hours.
FAMEs/d27-Myristic Acid Mixture n-Hexane	ACGIH TLV (United States, 1/2022). Absorbed through skin. TWA: 50 ppm 8 hours. OSHA PEL 1989 (United States, 3/1989). TWA: 50 ppm 8 hours. TWA: 180 mg/m ³ 8 hours. NIOSH REL (United States, 10/2020). TWA: 50 ppm 10 hours. TWA: 180 mg/m ³ 10 hours. OSHA PEL (United States, 5/2018). TWA: 500 ppm 8 hours. TWA: 1800 mg/m ³ 8 hours. CAL OSHA PEL (United States, 5/2018). Absorbed through skin. TWA: 180 mg/m ³ 8 hours. TWA: 50 ppm 8 hours.
MSTFA/1% TMCS N-Methyl-N-(trimethylsilyl)trifluoroacetamide Chlorotrimethylsilane	None. OARS WEEL (United States, 4/2022). CEIL: 5 ppm
d27-Myristic Acid 0.75 mg/mL n-Hexane	ACGIH TLV (United States, 1/2022). Absorbed through skin. TWA: 50 ppm 8 hours. OSHA PEL 1989 (United States, 3/1989). TWA: 50 ppm 8 hours. TWA: 180 mg/m ³ 8 hours. NIOSH REL (United States, 10/2020). TWA: 50 ppm 10 hours. TWA: 180 mg/m ³ 10 hours. OSHA PEL (United States, 5/2018). TWA: 500 ppm 8 hours. TWA: 1800 mg/m ³ 8 hours. CAL OSHA PEL (United States, 5/2018). Absorbed through skin.

Section 8. Exposure controls/personal protection

TWA: 180 mg/m³ 8 hours.
TWA: 50 ppm 8 hours.

Biological exposure indices

Ingredient name	Exposure indices
FAMES/d27-Myristic Acid Mixture	
n-Hexane	ACGIH BEI (United States, 1/2022) BEI: 0.5 mg/l, 2,5-hexanedion [in urine]. Sampling time: end of shift.
d27-Myristic Acid 0.75 mg/mL	
n-Hexane	ACGIH BEI (United States, 1/2022) BEI: 0.5 mg/l, 2,5-hexanedion [in urine]. Sampling time: end of shift.

8.2 Exposure controls

Appropriate engineering controls

- : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

Environmental exposure controls

- : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

Hygiene measures

- : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection

- : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles.

Skin protection

Hand protection

- : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Body protection

- : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Other skin protection

- : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection

- : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

Section 9. Physical and chemical properties and safety characteristics

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

Appearance

Physical state	Pyridine	Liquid.
	FAMES/d27-Myristic Acid Mixture	Liquid.
	MSTFA/1% TMCS	Liquid. [Clear.]
	d27-Myristic Acid 0.75 mg/mL	Liquid.
Color	Pyridine	Colorless.
	FAMES/d27-Myristic Acid Mixture	Colorless.
	MSTFA/1% TMCS	Colorless to light yellow.
	d27-Myristic Acid 0.75 mg/mL	Colorless.
Odor	Pyridine	Amine-like.
	FAMES/d27-Myristic Acid Mixture	Gasoline [Slight]
	MSTFA/1% TMCS	Not available.
	d27-Myristic Acid 0.75 mg/mL	Gasoline [Slight]
Odor threshold	Pyridine	0.2 ppm
	FAMES/d27-Myristic Acid Mixture	Not available.
	MSTFA/1% TMCS	Not available.
	d27-Myristic Acid 0.75 mg/mL	Not available.
pH	Pyridine	8.5 [Conc. (% w/w): 1.6%]
	FAMES/d27-Myristic Acid Mixture	Not available.
	MSTFA/1% TMCS	Not available.
	d27-Myristic Acid 0.75 mg/mL	Not available.
Melting point/freezing point	Pyridine	-42°C (-43.6°F)
	FAMES/d27-Myristic Acid Mixture	-139.4°C (-218.9°F)
	MSTFA/1% TMCS	Not available.
	d27-Myristic Acid 0.75 mg/mL	-139.4°C (-218.9°F)
Boiling point, initial boiling point, and boiling range	Pyridine	115°C (239°F)
	FAMES/d27-Myristic Acid Mixture	68.9°C (156°F)
	MSTFA/1% TMCS	130 to 132°C (266 to 269.6°F)
	d27-Myristic Acid 0.75 mg/mL	68.9°C (156°F)
Flash point	Pyridine	Closed cup: 19.85°C (67.7°F)
	FAMES/d27-Myristic Acid Mixture	Closed cup: -22°C (-7.6°F)
	MSTFA/1% TMCS	Closed cup: 25°C (77°F)
	d27-Myristic Acid 0.75 mg/mL	Closed cup: -18 to 23°C (-0.4 to 73.4°F)
Evaporation rate	Pyridine	1.37 (butyl acetate = 1)
	FAMES/d27-Myristic Acid Mixture	6.82 (butyl acetate = 1)
	MSTFA/1% TMCS	Not available.
	d27-Myristic Acid 0.75 mg/mL	6.82 (butyl acetate = 1)
Flammability	Pyridine	Not applicable.
	FAMES/d27-Myristic Acid Mixture	Not applicable.
	MSTFA/1% TMCS	Not applicable.
	d27-Myristic Acid 0.75 mg/mL	Not applicable.
Lower and upper explosion limit/flammability limit	Pyridine	Lower: 1.8%
		Upper: 12.5%
	FAMES/d27-Myristic Acid Mixture	Lower: 1.1%
		Upper: 7.5%
	MSTFA/1% TMCS	Not available.
	d27-Myristic Acid 0.75 mg/mL	Lower: 1.1%
Vapor pressure	Pyridine	1.9 kPa (14 mm Hg)
	MSTFA/1% TMCS	1.1 kPa (8 mm Hg)
	d27-Myristic Acid 0.75 mg/mL	16.5 kPa (124 mm Hg)

Section 9. Physical and chemical properties and safety characteristics

	Ingredient name	Vapor Pressure at 20°C			Vapor pressure at 50°C																								
		mm Hg	kPa	Method	mm Hg	kPa	Method																						
	FAMES/ d27-Myristic Acid Mixture																												
	n-Hexane	127.51	17	-	400.69	53.4	-																						
Relative vapor density	: Pyridine 2.73 [Air = 1] FAMES/d27-Myristic Acid Mixture 3 [Air = 1] MSTFA/1% TMCS 6.87 [Air = 1] d27-Myristic Acid 0.75 mg/mL 3 [Air = 1]																												
Relative density	: Pyridine 0.9819 FAMES/d27-Myristic Acid Mixture Not available. MSTFA/1% TMCS Not available. d27-Myristic Acid 0.75 mg/mL 0.659																												
Solubility(ies)	: <table><tr><th>Media</th><th>Result</th></tr><tr><td>Pyridine</td><td></td></tr><tr><td>water</td><td>Soluble</td></tr><tr><td>methanol</td><td>Soluble</td></tr><tr><td>diethyl ether</td><td>Soluble</td></tr><tr><td>FAMES/d27-Myristic Acid Mixture</td><td></td></tr><tr><td>water</td><td>Insoluble</td></tr><tr><td>MSTFA/1% TMCS</td><td></td></tr><tr><td>water</td><td>Insoluble</td></tr><tr><td>d27-Myristic Acid 0.75 mg/mL</td><td></td></tr><tr><td>water</td><td>Insoluble</td></tr></table>							Media	Result	Pyridine		water	Soluble	methanol	Soluble	diethyl ether	Soluble	FAMES/d27-Myristic Acid Mixture		water	Insoluble	MSTFA/1% TMCS		water	Insoluble	d27-Myristic Acid 0.75 mg/mL		water	Insoluble
Media	Result																												
Pyridine																													
water	Soluble																												
methanol	Soluble																												
diethyl ether	Soluble																												
FAMES/d27-Myristic Acid Mixture																													
water	Insoluble																												
MSTFA/1% TMCS																													
water	Insoluble																												
d27-Myristic Acid 0.75 mg/mL																													
water	Insoluble																												
Partition coefficient: n-octanol/water	: Pyridine 0.699 FAMES/d27-Myristic Acid Mixture 3.3 MSTFA/1% TMCS Not applicable. d27-Myristic Acid 0.75 mg/mL 3.3																												
Auto-ignition temperature	: Pyridine 482°C (899.6°F) FAMES/d27-Myristic Acid Mixture 225°C (437°F)																												
	Ingredient name	°C		°F		Method																							
	MSTFA/1% TMCS																												
	Chlorotrimethylsilane	407		764.6		ASTM E 659																							
	d27-Myristic Acid 0.75 mg/mL																												
	n-Hexane	225		437		-																							
Decomposition temperature	: Pyridine Not available. FAMES/d27-Myristic Acid Mixture Not available. MSTFA/1% TMCS Not available. d27-Myristic Acid 0.75 mg/mL Not available.																												
Viscosity	: Pyridine Not available. FAMES/d27-Myristic Acid Mixture Not available. MSTFA/1% TMCS Not available. d27-Myristic Acid 0.75 mg/mL Not available.																												

Section 9. Physical and chemical properties and safety characteristics

Median particle size	: Pyridine	Not applicable.
	FAMES/d27-Myristic Acid Mixture	Not applicable.
	MSTFA/1% TMCS	Not applicable.
	d27-Myristic Acid 0.75 mg/mL	Not applicable.

Section 10. Stability and reactivity

10.1 Reactivity	: Pyridine	No specific test data related to reactivity available for this product or its ingredients.
	FAMES/d27-Myristic Acid Mixture	No specific test data related to reactivity available for this product or its ingredients.
	MSTFA/1% TMCS	No specific test data related to reactivity available for this product or its ingredients.
	d27-Myristic Acid 0.75 mg/mL	No specific test data related to reactivity available for this product or its ingredients.
10.2 Chemical stability	: Pyridine	The product is stable.
	FAMES/d27-Myristic Acid Mixture	The product is stable.
	MSTFA/1% TMCS	The product is stable.
	d27-Myristic Acid 0.75 mg/mL	The product is stable.
10.3 Possibility of hazardous reactions	: Pyridine	Under normal conditions of storage and use, hazardous reactions will not occur.
	FAMES/d27-Myristic Acid Mixture	Under normal conditions of storage and use, hazardous reactions will not occur.
	MSTFA/1% TMCS	Under normal conditions of storage and use, hazardous reactions will not occur.
	d27-Myristic Acid 0.75 mg/mL	Under normal conditions of storage and use, hazardous reactions will not occur.
10.4 Conditions to avoid	: Pyridine	Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition. Do not allow vapor to accumulate in low or confined areas.
	FAMES/d27-Myristic Acid Mixture	Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition. Do not allow vapor to accumulate in low or confined areas.
	MSTFA/1% TMCS	Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition. Do not allow vapor to accumulate in low or confined areas.
	d27-Myristic Acid 0.75 mg/mL	Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition. Do not allow vapor to accumulate in low or confined areas.
10.5 Incompatible materials	: Pyridine	Reactive or incompatible with the following materials: oxidizing materials
	FAMES/d27-Myristic Acid Mixture	Reactive or incompatible with the following materials: oxidizing materials
	MSTFA/1% TMCS	Reactive or incompatible with the following materials:

Section 10. Stability and reactivity

d27-Myristic Acid 0.75 mg/mL oxidizing materials
 Reactive or incompatible with the following materials:
 oxidizing materials

10.6 Hazardous decomposition products

: Pyridine Under normal conditions of storage and use, hazardous decomposition products should not be produced.

FAMES/d27-Myristic Acid Mixture Under normal conditions of storage and use, hazardous decomposition products should not be produced.

MSTFA/1% TMCS Under normal conditions of storage and use, hazardous decomposition products should not be produced.

d27-Myristic Acid 0.75 mg/mL Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Pyridine Pyridine	LC50 Inhalation Vapor	Rat	9010 ppm	1 hours
FAMES/d27-Myristic Acid Mixture n-Hexane	LC50 Inhalation Vapor LD50 Oral	Rat Rat	169.2 mg/l 15840 mg/kg	4 hours -
MSTFA/1% TMCS Chlorotrimethylsilane	LC50 Inhalation Gas. LD50 Dermal	Rat - Male, Female Rabbit	4257 ppm 1520 mg/kg	1 hours -
d27-Myristic Acid 0.75 mg/mL n-Hexane	LC50 Inhalation Vapor LD50 Oral	Rat Rat	169.2 mg/l 15840 mg/kg	4 hours -

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
Pyridine Pyridine	Skin - Mild irritant	Rabbit	-	24 hours 500 mg	-
FAMES/d27-Myristic Acid Mixture n-Hexane	Eyes - Mild irritant	Rabbit	-	10 mg	-
MSTFA/1% TMCS Chlorotrimethylsilane	Eyes - Moderate irritant Skin - Moderate irritant	Rabbit Rabbit	- -	5 uL 500 uL	- -
d27-Myristic Acid 0.75 mg/mL n-Hexane	Eyes - Mild irritant	Rabbit	-	10 mg	-

Section 11. Toxicological information

Sensitization

Not available.

Mutagenicity

Conclusion/Summary : Not available.

Carcinogenicity

Conclusion/Summary : Not available.

Classification

Product/ingredient name	OSHA	IARC	NTP
Pyridine Pyridine	-	2B	-

Reproductive toxicity

Conclusion/Summary : Not available.

Teratogenicity

Conclusion/Summary : Not available.

Specific target organ toxicity (single exposure)

Name	Category	Route of exposure	Target organs
Pyridine Pyridine	Category 3	-	Narcotic effects
FAMES/d27-Myristic Acid Mixture n-Hexane	Category 3	-	Respiratory tract irritation
	Category 3	-	Narcotic effects
MSTFA/1% TMCS N-Methyl-N-(trimethylsilyl)trifluoroacetamide	Category 3	-	Respiratory tract irritation
d27-Myristic Acid 0.75 mg/mL n-Hexane	Category 3	-	Respiratory tract irritation
	Category 3	-	Narcotic effects

Specific target organ toxicity (repeated exposure)

Name	Category	Route of exposure	Target organs
FAMES/d27-Myristic Acid Mixture n-Hexane	Category 2	inhalation	nervous system
d27-Myristic Acid 0.75 mg/mL n-Hexane	Category 2	inhalation	nervous system

Aspiration hazard

Name	Result
FAMES/d27-Myristic Acid Mixture FAMES/d27-Myristic Acid Mixture n-Hexane	ASPIRATION HAZARD - Category 1 ASPIRATION HAZARD - Category 1
d27-Myristic Acid 0.75 mg/mL d27-Myristic Acid 0.75 mg/mL n-Hexane	ASPIRATION HAZARD - Category 1 ASPIRATION HAZARD - Category 1

Section 11. Toxicological information

Information on the likely routes of exposure

: Pyridine

Routes of entry anticipated: Oral, Dermal, Inhalation, Eyes.

FAMEs/d27-Myristic Acid Mixture

Routes of entry anticipated: Oral, Dermal, Inhalation, Eyes.

MSTFA/1% TMCS

Routes of entry anticipated: Oral, Dermal, Inhalation, Eyes.

d27-Myristic Acid 0.75 mg/mL

Routes of entry anticipated: Oral, Dermal, Inhalation, Eyes.

Potential acute health effects

Eye contact

: Pyridine

Causes serious eye irritation.

FAMEs/d27-Myristic Acid Mixture

Causes eye irritation.

MSTFA/1% TMCS

Causes serious eye irritation.

d27-Myristic Acid 0.75 mg/mL

Causes eye irritation.

Inhalation

: Pyridine

Harmful if inhaled. Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness.

FAMEs/d27-Myristic Acid Mixture

Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness.

MSTFA/1% TMCS

May cause respiratory irritation.

d27-Myristic Acid 0.75 mg/mL

Toxic if inhaled. Corrosive to the respiratory system.

Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness.

May cause respiratory irritation.

Skin contact

: Pyridine

Harmful in contact with skin.

FAMEs/d27-Myristic Acid Mixture

Causes skin irritation.

MSTFA/1% TMCS

Harmful in contact with skin. Causes skin irritation.

d27-Myristic Acid 0.75 mg/mL

Causes skin irritation.

Ingestion

: Pyridine

Harmful if swallowed. Can cause central nervous system (CNS) depression.

FAMEs/d27-Myristic Acid Mixture

Can cause central nervous system (CNS) depression. May be fatal if swallowed and enters airways.

MSTFA/1% TMCS

Toxic if swallowed. May cause burns to mouth, throat and stomach.

d27-Myristic Acid 0.75 mg/mL

Can cause central nervous system (CNS) depression. May be fatal if swallowed and enters airways.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact

: Pyridine

Adverse symptoms may include the following:
pain or irritation
watering
redness

FAMEs/d27-Myristic Acid Mixture

Adverse symptoms may include the following:
pain or irritation
watering
redness

MSTFA/1% TMCS

Adverse symptoms may include the following:
pain or irritation
watering
redness

d27-Myristic Acid 0.75 mg/mL

Adverse symptoms may include the following:
pain or irritation
watering
redness

Section 11. Toxicological information

Inhalation

: Pyridine

Adverse symptoms may include the following:
 nausea or vomiting
 headache
 drowsiness/fatigue
 dizziness/vertigo
 unconsciousness

FAMES/d27-Myristic Acid Mixture

Adverse symptoms may include the following:
 respiratory tract irritation
 coughing
 nausea or vomiting
 headache
 drowsiness/fatigue
 dizziness/vertigo
 unconsciousness

MSTFA/1% TMCS

Adverse symptoms may include the following:
 respiratory tract irritation
 coughing

d27-Myristic Acid 0.75 mg/mL

Adverse symptoms may include the following:
 respiratory tract irritation
 coughing
 nausea or vomiting
 headache
 drowsiness/fatigue
 dizziness/vertigo
 unconsciousness
 reduced fetal weight
 increase in fetal deaths
 skeletal malformations

Skin contact

: Pyridine

No specific data.

FAMES/d27-Myristic Acid Mixture

Adverse symptoms may include the following:
 irritation
 redness
 reduced fetal weight
 increase in fetal deaths
 skeletal malformations

MSTFA/1% TMCS

Adverse symptoms may include the following:
 irritation
 redness

d27-Myristic Acid 0.75 mg/mL

Adverse symptoms may include the following:
 irritation
 redness
 reduced fetal weight
 increase in fetal deaths
 skeletal malformations

Ingestion

: Pyridine

No specific data.

FAMES/d27-Myristic Acid Mixture

Adverse symptoms may include the following:
 nausea or vomiting
 reduced fetal weight
 increase in fetal deaths
 skeletal malformations

MSTFA/1% TMCS

No specific data.

d27-Myristic Acid 0.75 mg/mL

Adverse symptoms may include the following:
 nausea or vomiting
 reduced fetal weight
 increase in fetal deaths
 skeletal malformations

Section 11. Toxicological information

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

General	Pyridine	No known significant effects or critical hazards.
	FAMES/d27-Myristic Acid Mixture	May cause damage to organs through prolonged or repeated exposure.
	MSTFA/1% TMCS	No known significant effects or critical hazards.
	d27-Myristic Acid 0.75 mg/mL	May cause damage to organs through prolonged or repeated exposure.
Carcinogenicity	Pyridine	Suspected of causing cancer. Risk of cancer depends on duration and level of exposure.
	FAMES/d27-Myristic Acid Mixture	No known significant effects or critical hazards.
	MSTFA/1% TMCS	No known significant effects or critical hazards.
	d27-Myristic Acid 0.75 mg/mL	No known significant effects or critical hazards.
Mutagenicity	Pyridine	No known significant effects or critical hazards.
	FAMES/d27-Myristic Acid Mixture	No known significant effects or critical hazards.
	MSTFA/1% TMCS	No known significant effects or critical hazards.
	d27-Myristic Acid 0.75 mg/mL	No known significant effects or critical hazards.
Reproductive toxicity	Pyridine	No known significant effects or critical hazards.
	FAMES/d27-Myristic Acid Mixture	Suspected of damaging fertility or the unborn child.
	MSTFA/1% TMCS	No known significant effects or critical hazards.
	d27-Myristic Acid 0.75 mg/mL	Suspected of damaging fertility or the unborn child.

Numerical measures of toxicity

Acute toxicity estimates

Product/ingredient name	Oral (mg/kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapors) (mg/l)	Inhalation (dusts and mists) (mg/l)
Pyridine Pyridine	891	1120	N/A	12.9	N/A
FAMES/d27-Myristic Acid Mixture n-Hexane	15840	N/A	N/A	169.2	N/A
MSTFA/1% TMCS MSTFA/1% TMCS Chlorotrimethylsilane	100	1520.0	2128.5	N/A	N/A
	100	1520	2128.5	N/A	N/A
d27-Myristic Acid 0.75 mg/mL n-Hexane	15840	N/A	N/A	169.2	N/A

Other information :  Pyridine

Adverse symptoms include the following: central nervous system depression, nausea or vomiting, headache, kidney abnormalities. Over-exposure may cause serious liver disorders.

Section 12. Ecological information

12.1 Toxicity

Product/ingredient name	Result	Species	Exposure
Pyridine Pyridine	Acute EC50 110000 µg/l Fresh water Acute LC50 182000 µg/l Fresh water Acute LC50 520000 µg/l Fresh water Acute LC50 26000 µg/l Fresh water	Algae - <i>Selenastrum</i> sp. Crustaceans - <i>Gammarus pulex</i> Daphnia - <i>Daphnia pulex</i> Fish - <i>Cyprinus carpio</i>	96 hours 48 hours 48 hours 96 hours
FAMES/d27-Myristic Acid Mixture n-Hexane	Acute LC50 2500 µg/l Fresh water	Fish - <i>Pimephales promelas</i>	96 hours
d27-Myristic Acid 0.75 mg/mL n-Hexane	Acute LC50 2500 µg/l Fresh water	Fish - <i>Pimephales promelas</i>	96 hours

12.2 Persistence and degradability

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
Pyridine Pyridine	-	-	Readily
FAMES/d27-Myristic Acid Mixture n-Hexane	-	-	Readily
MSTFA/1% TMCS Chlorotrimethylsilane	-	-	Not readily
d27-Myristic Acid 0.75 mg/mL n-Hexane	-	-	Readily

12.3 Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
Pyridine Pyridine	0.699	-	Low
FAMES/d27-Myristic Acid Mixture FAMES/d27-Myristic Acid Mixture	3.3	-	Low
n-Hexane	4	501.187	High
MSTFA/1% TMCS Chlorotrimethylsilane	1.19	-	Low
d27-Myristic Acid 0.75 mg/mL d27-Myristic Acid 0.75 mg/mL	3.3	-	Low
n-Hexane	4	501.187	High

12.4 Mobility in soil

Section 12. Ecological information

Soil/water partition coefficient (K_{oc}) : Not available.


12.5 Other adverse effects : No known significant effects or critical hazards.

Section 13. Disposal considerations

13.1 Waste treatment methods

Disposal methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

United States - RCRA Toxic hazardous waste "U" List

Ingredient	CAS #	Status	Reference number
 Pyridine Pyridine	110-86-1	Listed	U196

Disposal should be in accordance with applicable regional, national and local laws and regulations. Local regulations may be more stringent than regional or national requirements.


The information presented below only applies to the material as supplied. The identification based on characteristic(s) or listing may not apply if the material has been used or otherwise contaminated. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable regulations.

Refer to Section 7: HANDLING AND STORAGE and Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for additional handling information and protection of employees.

Section 14. Transport information

DOT / TDG / Mexico / IMDG / IATA : Not regulated.

Additional information

DOT Classification :  **Reportable quantity** 4000 lbs / 1816 kg. Package sizes shipped in quantities less than the product reportable quantity are not subject to the RQ (reportable quantity) transportation requirements.

Special precautions for user : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Transport in bulk according to IMO instruments : Not available.

Section 15. Regulatory information

[15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture](#)

U.S. Federal regulations : TSCA 8(a) CDR Exempt/Partial exemption: Not determined

Clean Air Act Section 112 : Listed

(b) Hazardous Air Pollutants (HAPs)

Clean Air Act Section 602 Class I Substances : Not listed

Clean Air Act Section 602 Class II Substances : Not listed

DEA List I Chemicals (Precursor Chemicals) : Not listed

DEA List II Chemicals (Essential Chemicals) : Not listed

[SARA 302/304](#)

[Composition/information on ingredients](#)

Name	%	EHS	SARA 302 TPQ		SARA 304 RQ	
			(lbs)	(gallons)	(lbs)	(gallons)
MSTFA/1% TMCS Chlorotrimethylsilane	≤1.5	Yes.	1000	141.1	1000	141.1

SARA 304 RQ : 400000 lbs / 181600 kg

[SARA 311/312](#)

Classification

:  Pyridine

FAMEs/d27-Myristic Acid Mixture

MSTFA/1% TMCS

d27-Myristic Acid 0.75 mg/mL

FLAMMABLE LIQUIDS - Category 2
 ACUTE TOXICITY (oral) - Category 4
 ACUTE TOXICITY (dermal) - Category 4
 ACUTE TOXICITY (inhalation) - Category 4
 EYE IRRITATION - Category 2A
 CARCINOGENICITY - Category 2
 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3
 FLAMMABLE LIQUIDS - Category 2
 SKIN IRRITATION - Category 2
 EYE IRRITATION - Category 2B
 TOXIC TO REPRODUCTION - Category 2
 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3
 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3
 SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2
 ASPIRATION HAZARD - Category 1
 FLAMMABLE LIQUIDS - Category 3
 ACUTE TOXICITY (oral) - Category 3
 ACUTE TOXICITY (dermal) - Category 4
 ACUTE TOXICITY (inhalation) - Category 3
 SKIN IRRITATION - Category 2
 EYE IRRITATION - Category 2A
 HNOC - Corrosive to respiratory tract
 FLAMMABLE LIQUIDS - Category 2
 SKIN IRRITATION - Category 2
 EYE IRRITATION - Category 2B
 TOXIC TO REPRODUCTION - Category 2
 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3
 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3
 SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2
 ASPIRATION HAZARD - Category 1

[Composition/information on ingredients](#)

Section 15. Regulatory information

Name	%	Classification
Pyridine Pyridine	100	FLAMMABLE LIQUIDS - Category 2 ACUTE TOXICITY (oral) - Category 4 ACUTE TOXICITY (dermal) - Category 4 ACUTE TOXICITY (inhalation) - Category 4 EYE IRRITATION - Category 2A CARCINOGENICITY - Category 2 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3
FAMEs/d27-Myristic Acid Mixture n-Hexane	≥90	FLAMMABLE LIQUIDS - Category 2 SKIN IRRITATION - Category 2 EYE IRRITATION - Category 2B TOXIC TO REPRODUCTION - Category 2 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3 SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2 ASPIRATION HAZARD - Category 1 HNOC - Static-accumulating flammable liquid
MSTFA/1% TMCS N-Methyl-N-(trimethylsilyl) trifluoroacetamide	≥90	FLAMMABLE LIQUIDS - Category 3 SKIN IRRITATION - Category 2 EYE IRRITATION - Category 2A SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3
Chlorotrimethylsilane	≤1.5	FLAMMABLE LIQUIDS - Category 2 ACUTE TOXICITY (oral) - Category 3 ACUTE TOXICITY (dermal) - Category 4 ACUTE TOXICITY (inhalation) - Category 3 SKIN CORROSION - Category 1A EYE IRRITATION - Category 2A HNOC - Corrosive to digestive tract HNOC - Corrosive to respiratory tract
d27-Myristic Acid 0.75 mg/mL n-Hexane	≥90	FLAMMABLE LIQUIDS - Category 2 SKIN IRRITATION - Category 2 EYE IRRITATION - Category 2B TOXIC TO REPRODUCTION - Category 2 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3 SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2 ASPIRATION HAZARD - Category 1 HNOC - Static-accumulating flammable liquid

SARA 313

	Product name	CAS number	%
Form R - Reporting requirements	Pyridine Pyridine	110-86-1	100
	FAMEs/d27-Myristic Acid Mixture n-Hexane	110-54-3	≥90
	d27-Myristic Acid 0.75 mg/mL n-Hexane	110-54-3	≥90

Section 15. Regulatory information

Supplier notification	Pyridine Pyridine	110-86-1	100
	FAMES/d27-Myristic Acid Mixture n-Hexane	110-54-3	≥90
	d27-Myristic Acid 0.75 mg/mL n-Hexane	110-54-3	≥90

SARA 313 notifications must not be detached from the SDS and any copying and redistribution of the SDS shall include copying and redistribution of the notice attached to copies of the SDS subsequently redistributed.

State regulations

- Massachusetts** : The following components are listed: HEXANE; PYRIDINE
- New York** : The following components are listed: Hexane; Pyridine
- New Jersey** : The following components are listed: n-HEXANE; PYRIDINE
- Pennsylvania** : The following components are listed: HEXANE; PYRIDINE

California Prop. 65

WARNING: This product can expose you to chemicals including Pyridine, which is known to the State of California to cause cancer, and n-hexane, which is known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

Ingredient name	No significant risk level	Maximum acceptable dosage level
Pyridine Pyridine	-	-
FAMES/d27-Myristic Acid Mixture n-hexane	-	Yes.
d27-Myristic Acid 0.75 mg/mL n-hexane	-	Yes.

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

Inventory list

- Australia** : Not determined.
- Canada** : Not determined.
- China** : Not determined.
- Japan** : **Japan inventory (CSCL):** Not determined.
Japan inventory (ISHL): Not determined.

Section 15. Regulatory information

New Zealand	: Not determined.
Philippines	: Not determined.
Republic of Korea	: Not determined.
Taiwan	: Not determined.
Thailand	: Not determined.
Turkey	: Not determined.
United States	: Not determined.
Viet Nam	: Not determined.

Section 16. Other information

Procedure used to derive the classification

Classification	Justification
Pyridine FLAMMABLE LIQUIDS - Category 2 ACUTE TOXICITY (oral) - Category 4 ACUTE TOXICITY (dermal) - Category 4 ACUTE TOXICITY (inhalation) - Category 4 EYE IRRITATION - Category 2A CARCINOGENICITY - Category 2 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3	On basis of test data On basis of test data On basis of test data On basis of test data Expert judgment Expert judgment Expert judgment
FAMEs/d27-Myristic Acid Mixture FLAMMABLE LIQUIDS - Category 2 SKIN IRRITATION - Category 2 EYE IRRITATION - Category 2B TOXIC TO REPRODUCTION - Category 2 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3 SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2 ASPIRATION HAZARD - Category 1 AQUATIC HAZARD (LONG-TERM) - Category 2	On basis of test data Calculation method Calculation method Calculation method Calculation method Calculation method Calculation method Calculation method Expert judgment Calculation method
MSTFA/1% TMCS FLAMMABLE LIQUIDS - Category 3 ACUTE TOXICITY (oral) - Category 3 ACUTE TOXICITY (dermal) - Category 4 ACUTE TOXICITY (inhalation) - Category 3 SKIN IRRITATION - Category 2 EYE IRRITATION - Category 2A	On basis of test data Calculation method Calculation method Calculation method Calculation method Calculation method
d27-Myristic Acid 0.75 mg/mL FLAMMABLE LIQUIDS - Category 2 SKIN IRRITATION - Category 2 EYE IRRITATION - Category 2B TOXIC TO REPRODUCTION - Category 2 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3 SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2 ASPIRATION HAZARD - Category 1 AQUATIC HAZARD (LONG-TERM) - Category 2	On basis of test data Calculation method Calculation method Calculation method Calculation method Calculation method Calculation method Calculation method Expert judgment Calculation method

History

Section 16. Other information

Date of issue/Date of revision	: 08/03/2023
Date of previous issue	: 03/30/2021
Version	: 8
Key to abbreviations	: ATE = Acute Toxicity Estimate BCF = Bioconcentration Factor GHS = Globally Harmonized System of Classification and Labelling of Chemicals IATA = International Air Transport Association IBC = Intermediate Bulk Container IMDG = International Maritime Dangerous Goods LogPow = logarithm of the octanol/water partition coefficient MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution) N/A = Not available UN = United Nations

📌 Indicates information that has changed from previously issued version.

Notice to reader

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