

SAFETY DATA SHEET



Biodiesel Reference Standards Kit, Part Number 0020-905

Section 1. Identification

Product identifier : Biodiesel Reference Standards Kit, Part Number 0020-905
Part No. (Chemical Kit) : 0020-905
Part No. : A2-103 Not available.
 A2-104 Not available.
 A2-105 Not available.

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

Analytical chemistry.

1 ml x 36 vials

A2-103	12 x 1 ml vials
A2-104	12 x 1 ml vials
A2-105	12 x 1 ml vials

Supplier/Manufacturer : Agilent Technologies Australia Pty Ltd
 679 Springvale Road
 Mulgrave
 Victoria 3170, Australia
 1800 802 402

Emergency telephone number (with hours of operation) : CHEMTREC®: +(61)-290372994

Section 2. Hazard(s) identification

Classification of the substance or mixture

A2-103
 H227 FLAMMABLE LIQUIDS - Category 4
 H351 CARCINOGENICITY - Category 2
 H304 ASPIRATION HAZARD - Category 1

A2-104
 H227 FLAMMABLE LIQUIDS - Category 4
 H351 CARCINOGENICITY - Category 2
 H304 ASPIRATION HAZARD - Category 1

A2-105
 H227 FLAMMABLE LIQUIDS - Category 4
 H351 CARCINOGENICITY - Category 2
 H304 ASPIRATION HAZARD - Category 1

GHS label elements

Section 2. Hazard(s) identification

Hazard pictograms	: A2-103	
	A2-104	
	A2-105	
Signal word	: A2-103 A2-104 A2-105	DANGER DANGER DANGER
Hazard statements	: A2-103	H227 - Combustible liquid. H351 - Suspected of causing cancer.
	A2-104	H304 - May be fatal if swallowed and enters airways. H227 - Combustible liquid. H351 - Suspected of causing cancer.
	A2-105	H304 - May be fatal if swallowed and enters airways. H227 - Combustible liquid. H351 - Suspected of causing cancer.
<u>Precautionary statements</u>		
Prevention	: A2-103	P201 - Obtain special instructions before use. P202 - Do not handle until all safety precautions have been read and understood. P281 - Use personal protective equipment as required. P280 - Wear protective gloves. Wear eye or face protection.
	A2-104	P210 - Keep away from flames and hot surfaces. - No smoking. P201 - Obtain special instructions before use. P202 - Do not handle until all safety precautions have been read and understood. P281 - Use personal protective equipment as required. P280 - Wear protective gloves. Wear eye or face protection.
	A2-105	P210 - Keep away from flames and hot surfaces. - No smoking. P201 - Obtain special instructions before use. P202 - Do not handle until all safety precautions have been read and understood. P281 - Use personal protective equipment as required. P280 - Wear protective gloves. Wear eye or face protection.
Response	: A2-103	P308 + P313 - IF exposed or concerned: Get medical attention. P301 + P310 + P331 - IF SWALLOWED: Immediately call a POISON CENTER or physician. Do NOT induce vomiting.
	A2-104	P308 + P313 - IF exposed or concerned: Get medical attention.

Section 2. Hazard(s) identification

		P301 + P310 + P331 - IF SWALLOWED: Immediately call a POISON CENTER or physician. Do NOT induce vomiting.
	A2-105	P308 + P313 - IF exposed or concerned: Get medical attention.
Storage	: A2 -103	P301 + P310 + P331 - IF SWALLOWED: Immediately call a POISON CENTER or physician. Do NOT induce vomiting.
	A2-104	P405 - Store locked up. P403 - Store in a well-ventilated place. P235 - Keep cool.
	A2-105	P405 - Store locked up. P403 - Store in a well-ventilated place. P235 - Keep cool.
Disposal	: A2 -103	P405 - Store locked up. P403 - Store in a well-ventilated place. P235 - Keep cool.
	A2-104	P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.
	A2-105	P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.
Supplemental label elements	: A2 -103	Not applicable.
	A2-104	Not applicable.
	A2-105	Not applicable.
Other hazards which do not result in classification	: A2 -103	None known.
	A2-104	None known.
	A2-105	None known.

Section 3. Composition and ingredient information

Substance/mixture	: A2 -103	Substance
	A2-104	Mixture
	A2-105	Mixture

CAS number/other identifiers

Ingredient name	% (w/w)	CAS number
A2 -103 Fuels, diesel, No 2	100	68476-34-6
A2-104 Fuels, diesel, No 2	≥90	68476-34-6
A2-105 Fuels, diesel, No 2	≥90	68476-34-6

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

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

Section 4. First aid measures

Description of necessary first aid measures

Eye contact	:  A2-103	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.
	A2-104	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.
	A2-105	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	:  A2-103	Remove victim to fresh air and keep at rest in a position comfortable for breathing. 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 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.
	A2-104	Remove victim to fresh air and keep at rest in a position comfortable for breathing. 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 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.
	A2-105	Remove victim to fresh air and keep at rest in a position comfortable for breathing. 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 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	:  A2-103	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.
	A2-104	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.
	A2-105	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.

Section 4. First aid measures

Ingestion	: A2-103	Get medical attention immediately. Call a poison center or physician. Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. 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.
	A2-104	Get medical attention immediately. Call a poison center or physician. Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. 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.
	A2-105	Get medical attention immediately. Call a poison center or physician. Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. 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.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact	: A2-103 A2-104 A2-105	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.
Inhalation	: A2-103 A2-104 A2-105	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.
Skin contact	: A2-103 A2-104 A2-105	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.

Section 4. First aid measures

Ingestion	: A2-103 A2-104 A2-105	May be fatal if swallowed and enters airways. May be fatal if swallowed and enters airways. May be fatal if swallowed and enters airways.
<u>Over-exposure signs/symptoms</u>		
Eye contact	: A2-103 A2-104 A2-105	No specific data. No specific data. No specific data.
Inhalation	: A2-103 A2-104 A2-105	No specific data. No specific data. No specific data.
Skin contact	: A2-103 A2-104 A2-105	No specific data. No specific data. No specific data.
Ingestion	: A2-103 A2-104 A2-105	Adverse symptoms may include the following: nausea or vomiting Adverse symptoms may include the following: nausea or vomiting Adverse symptoms may include the following: nausea or vomiting
<u>Indication of immediate medical attention and special treatment needed, if necessary</u>		
Notes to physician	: A2-103 A2-104 A2-105	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled. Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled. Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
Specific treatments	: A2-103 A2-104 A2-105	No specific treatment. No specific treatment. No specific treatment.
Protection of first-aiders	: A2-103 A2-104 A2-105	No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

See toxicological information (Section 11)

Section 5. Firefighting measures

Extinguishing media




Suitable extinguishing media	: A2-103 A2-104 A2-105	Use dry chemical, CO ₂ , water spray (fog) or foam. Use dry chemical, CO ₂ , water spray (fog) or foam. Use dry chemical, CO ₂ , water spray (fog) or foam.
Unsuitable extinguishing media	: A2-103 A2-104 A2-105	Do not use water jet. Do not use water jet. Do not use water jet.

Section 5. Firefighting measures

Specific hazards arising from the chemical	: A2-103	Combustible liquid. 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.
	A2-104	Combustible liquid. 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.
	A2-105	Combustible liquid. 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.
Hazardous thermal decomposition products	: A2-103	Decomposition products may include the following materials: carbon dioxide carbon monoxide
	A2-104	Decomposition products may include the following materials: carbon dioxide carbon monoxide
	A2-105	Decomposition products may include the following materials: carbon dioxide carbon monoxide
Special protective actions for fire-fighters	: A2-103	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.
	A2-104	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.
	A2-105	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	: A2-103	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
	A2-104	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
	A2-105	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
Hazchem code	: A2-103	•3Z
	A2-104	•3Z
	A2-105	•3Z

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel	:  A2-103	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 spilt material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
	A2-104	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 spilt material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
	A2-105	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 spilt material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
For emergency responders	:  A2-103	If specialised 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".
	A2-104	If specialised 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".
	A2-105	If specialised 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".
Environmental precautions	:  A2-103	Avoid dispersal of spilt 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).
	A2-104	Avoid dispersal of spilt 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).
	A2-105	Avoid dispersal of spilt 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).

Methods and material for containment and cleaning up

Section 6. Accidental release measures

Methods for cleaning up : A2-103

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.

A2-104

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.

A2-105

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

Precautions for safe handling

Protective measures : A2-103

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 swallow. Avoid breathing vapour 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. Empty containers retain product residue and can be hazardous. Do not reuse container.

A2-104

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 swallow. Avoid breathing vapour 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. Empty containers retain product residue and can be hazardous. Do not reuse container.

A2-105

Put on appropriate personal protective equipment (see Section 8). Avoid exposure - obtain special

Section 7. Handling and storage

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 swallow. Avoid breathing vapour 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. Empty containers retain product residue and can be hazardous. Do not reuse container.

Advice on general occupational hygiene

: A2-103

A2-104

A2-105

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.

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.

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.

Conditions for safe storage, including any incompatibilities

: A2-103

A2-104

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 unlabelled 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 unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section

Section 7. Handling and storage

A2-105

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 unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

Section 8. Exposure controls and personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
A2-103 Fuels, diesel, No 2	ACGIH TLV (United States, 3/2016). Absorbed through skin. TWA: 100 mg/m ³ , (measured as total hydrocarbons) 8 hours. Form: Inhalable fraction and vapor
A2-104 Fuels, diesel, No 2	ACGIH TLV (United States, 3/2016). Absorbed through skin. TWA: 100 mg/m ³ , (measured as total hydrocarbons) 8 hours. Form: Inhalable fraction and vapor
A2-105 Fuels, diesel, No 2	ACGIH TLV (United States, 3/2016). Absorbed through skin. TWA: 100 mg/m ³ , (measured as total hydrocarbons) 8 hours. Form: Inhalable fraction and vapor

Appropriate engineering controls

: If user operations generate dust, fumes, gas, vapour or mist, 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.

Section 8. Exposure controls and personal protection

- 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: safety glasses with side-shields.
- 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

Appearance

Physical state	: A2-103	Liquid. [Fluid.]
	A2-104	Liquid. [Fluid.]
	A2-105	Liquid. [Fluid.]
Colour	: A2-103	Not available.
	A2-104	Not available.
	A2-105	Not available.
Odour	: A2-103	Characteristic.
	A2-104	Characteristic.
	A2-105	Characteristic.
Odour threshold	: A2-103	Not available.
	A2-104	Not available.
	A2-105	Not available.
pH	: A2-103	Not available.
	A2-104	Not available.
	A2-105	Not available.
Melting point	: A2-103	Not available.
	A2-104	Not available.
	A2-105	Not available.
Boiling point	: A2-103	204°C (399.2°F)
	A2-104	204°C (399.2°F)
	A2-105	204°C (399.2°F)
Flash point	: A2-103	Closed cup: 69°C (156.2°F)
	A2-104	Closed cup: 69°C (156.2°F)
	A2-105	Closed cup: 69°C (156.2°F)
Evaporation rate	: A2-103	Not available.
	A2-104	Not available.
	A2-105	Not available.
Flammability (solid, gas)	: A2-103	Not applicable.
	A2-104	Not applicable.
	A2-105	Not applicable.

Section 9. Physical and chemical properties

Lower and upper explosive (flammable) limits	: A2-103	Not available.
	A2-104	Not available.
	A2-105	Not available.
Vapour pressure	: A2-103	Not available.
	A2-104	Not available.
	A2-105	Not available.
Vapour density	: A2-103	Not available.
	A2-104	Not available.
	A2-105	Not available.
Relative density	: A2-103	Not available.
	A2-104	Not available.
	A2-105	1.105
Solubility	: A2-103	Insoluble in the following materials: cold water and hot water.
	A2-104	Insoluble in the following materials: cold water and hot water.
	A2-105	Insoluble in the following materials: cold water and hot water.
Partition coefficient: n-octanol/water	: A2-103	Not available.
	A2-104	Not available.
	A2-105	Not available.
Auto-ignition temperature	: A2-103	Not available.
	A2-104	Not available.
	A2-105	Not available.
Decomposition temperature	: A2-103	Not available.
	A2-104	Not available.
	A2-105	Not available.
Viscosity	: A2-103	Not available.
	A2-104	Not available.
	A2-105	Not available.

Section 10. Stability and reactivity

Reactivity	: A2-103	No specific test data related to reactivity available for this product or its ingredients.
	A2-104	No specific test data related to reactivity available for this product or its ingredients.
	A2-105	No specific test data related to reactivity available for this product or its ingredients.
Chemical stability	: A2-103	The product is stable.
	A2-104	The product is stable.
	A2-105	The product is stable.
Possibility of hazardous reactions	: A2-103	Under normal conditions of storage and use, hazardous reactions will not occur.
	A2-104	Under normal conditions of storage and use, hazardous reactions will not occur.
	A2-105	Under normal conditions of storage and use, hazardous reactions will not occur.
Conditions to avoid	: A2-103	Avoid all possible sources of ignition (spark or flame). Do not pressurise, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition.
	A2-104	Avoid all possible sources of ignition (spark or flame). Do not pressurise, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition.
	A2-105	Avoid all possible sources of ignition (spark or flame). Do not pressurise, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition.

Section 10. Stability and reactivity

Incompatible materials	: A2 -103	Reactive or incompatible with the following materials: oxidizing materials
	A2-104	Reactive or incompatible with the following materials: oxidizing materials
	A2-105	Reactive or incompatible with the following materials: oxidizing materials
Hazardous decomposition products	: A2 -103	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
	A2-104	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
	A2-105	Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
A2 -103 Fuels, diesel, No 2	LD50 Dermal LD50 Oral	Rabbit Rat	4300 mg/kg 7600 mg/kg	- -
A2-104 Fuels, diesel, No 2	LD50 Dermal LD50 Oral	Rabbit Rat	4300 mg/kg 7600 mg/kg	- -
A2-105 Fuels, diesel, No 2	LD50 Dermal LD50 Oral	Rabbit Rat	4300 mg/kg 7600 mg/kg	- -

Irritation/Corrosion

Not available.

Sensitisation

Not available.

Mutagenicity

Not available.

Carcinogenicity

Not available.

Reproductive toxicity

Not available.

Teratogenicity

Not available.

Specific target organ toxicity (single exposure)

Not available.

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Section 11. Toxicological information

Name	Result
A2-103 Fuels, diesel, No 2	ASPIRATION HAZARD - Category 1
A2-104 A2-104	ASPIRATION HAZARD - Category 1
A2-105 A2-105	ASPIRATION HAZARD - Category 1

Information on likely routes of exposure : **A2-103** Routes of entry anticipated: Oral, Dermal, Inhalation.
A2-104 Routes of entry anticipated: Oral, Dermal, Inhalation.
A2-105 Routes of entry anticipated: Oral, Dermal, Inhalation.

Potential acute health effects

Eye contact : **A2-103** No known significant effects or critical hazards.
A2-104 No known significant effects or critical hazards.
A2-105 No known significant effects or critical hazards.

Inhalation : **A2-103** No known significant effects or critical hazards.
A2-104 No known significant effects or critical hazards.
A2-105 No known significant effects or critical hazards.

Skin contact : **A2-103** No known significant effects or critical hazards.
A2-104 No known significant effects or critical hazards.
A2-105 No known significant effects or critical hazards.

Ingestion : **A2-103** May be fatal if swallowed and enters airways.
A2-104 May be fatal if swallowed and enters airways.
A2-105 May be fatal if swallowed and enters airways.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : **A2-103** No specific data.
A2-104 No specific data.
A2-105 No specific data.

Inhalation : **A2-103** No specific data.
A2-104 No specific data.
A2-105 No specific data.

Skin contact : **A2-103** No specific data.
A2-104 No specific data.
A2-105 No specific data.

Ingestion : **A2-103** Adverse symptoms may include the following:
nausea or vomiting
A2-104 Adverse symptoms may include the following:
nausea or vomiting
A2-105 Adverse symptoms may include the following:
nausea or vomiting

Delayed and immediate effects as well as 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

Not available.

Section 11. Toxicological information

General	: <input checked="" type="checkbox"/> A2-103 A2-104 A2-105	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.
Carcinogenicity	: <input checked="" type="checkbox"/> A2-103 A2-104 A2-105	Suspected of causing cancer. Risk of cancer depends on duration and level of exposure. Suspected of causing cancer. Risk of cancer depends on duration and level of exposure. Suspected of causing cancer. Risk of cancer depends on duration and level of exposure.
Mutagenicity	: <input checked="" type="checkbox"/> A2-103 A2-104 A2-105	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.
Teratogenicity	: <input checked="" type="checkbox"/> A2-103 A2-104 A2-105	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.
Developmental effects	: <input checked="" type="checkbox"/> A2-103 A2-104 A2-105	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.
Fertility effects	: <input checked="" type="checkbox"/> A2-103 A2-104 A2-105	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Not available.

Section 12. Ecological information

Toxicity

Not available.

Persistence and degradability

Not available.

Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
<input checked="" type="checkbox"/> A2-103 Fuels, diesel, No 2	>3.3	-	low
A2-104 Fuels, diesel, No 2	>3.3	-	low
A2-105 Fuels, diesel, No 2	>3.3	-	low

Mobility in soil

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

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

Section 13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimised 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 spilt material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

ADG / IMDG / IATA : Not regulated as Dangerous Goods according to the ADG Code .

Additional information

☑e minimis quantities

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 Annex II of Marpol and the IBC Code : Not available.

Section 15. Regulatory information

Standard Uniform Schedule of Medicine and Poisons

Not regulated.

Model Work Health and Safety Regulations - Scheduled Substances

No listed substance

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol (Annexes A, B, C, E)

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 : All components are listed or exempted.
Canada : All components are listed or exempted.
China : All components are listed or exempted.
Europe : All components are listed or exempted.
Japan : **Japan inventory (ENCS):** Not determined.
Japan inventory (ISHL): Not determined.
Malaysia : Not determined.

Section 15. Regulatory information

New Zealand	: All components are listed or exempted.
Philippines	: Not determined.
Republic of Korea	: All components are listed or exempted.
Taiwan	: All components are listed or exempted.
Thailand	: Not determined.
Turkey	: Not determined.
United States	: All components are listed or exempted.
Viet Nam	: Not determined.

Section 16. Any other relevant information

History

Date of issue/Date of revision	: 12/07/2017
Date of previous issue	: 23/05/2014.
Version	: 3

Key to abbreviations

: ADG = Australian Dangerous Goods
: 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)
: NOHSC = National Occupational Health and Safety Commission
: SUSMP = Standard Uniform Schedule of Medicine and Poisons
: UN = United Nations

Procedure used to derive the classification

Classification	Justification
A2-103 Flam. Liq. 4, H227 Carc. 2, H351 Asp. Tox. 1, H304	On basis of test data Calculation method Expert judgment
A2-104 Flam. Liq. 4, H227 Carc. 2, H351 Asp. Tox. 1, H304	On basis of test data Calculation method Expert judgment
A2-105 Flam. Liq. 4, H227 Carc. 2, H351 Asp. Tox. 1, H304	On basis of test data Calculation method Expert judgment

References : Not available.

Indicates information that has changed from previously issued version.

Notice to reader

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