

SAFETY DATA SHEET

RRHD Eclipse Plus Method Development Kit, Part Number 5190-6153

Section 1. Identification

This product is considered an article. This Safety Data Sheet is written based on the encapsulated substance or mixture in this article.

1.1 Product identifier

Product name : RRHD Eclipse Plus Method Development Kit, Part Number 5190-6153
Part no. (chemical kit) : 5190-6153
Part no. : RRHD Eclipse Plus C18 959757-902
 RRHD Eclipse Plus C8 959757-906
 RRHD Eclipse Plus Ph-Hex 959757-912

Validation date : 4/1/2022

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

Material uses : Analytical chemistry.
 Column
 RRHD Eclipse Plus C18 2.1 x 50 mm, 1.8 um Solvent Volume:
 0.1 ml
 RRHD Eclipse Plus C8 2.1 x 50 mm, 1.8 um Solvent Volume:
 0.1 ml
 RRHD Eclipse Plus Ph-Hex 2.1 x 50 mm, 1.8 um Solvent Volume:
 0.1 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

1.4 Emergency telephone number

In case of emergency : CHEMTREC®: 1-800-424-9300

Section 2. Hazards identification

This article, when used under reasonable conditions and in accordance with the directions for use, should not present a health hazard. The substance or mixture is encapsulated in the article. Only if released due to use or processing of the article in a manner not in accordance with the product's directions for use it may present potential health and safety hazards.

2.1 Classification of the substance or mixture

OSHA/HCS status : RRHD Eclipse Plus C18 This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
 RRHD Eclipse Plus C8 This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
 RRHD Eclipse Plus Ph-Hex This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Classification of the substance or mixture

RRHD Eclipse Plus C18

H225 FLAMMABLE LIQUIDS - Category 2
 H319 EYE IRRITATION - Category 2A
 H373 SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2

RRHD Eclipse Plus C8

H225 FLAMMABLE LIQUIDS - Category 2

Section 2. Hazards identification

H319 EYE IRRITATION - Category 2A
H373 SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2

RRHD Eclipse Plus Ph-Hex

H225 FLAMMABLE LIQUIDS - Category 2
H319 EYE IRRITATION - Category 2A
H373 SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2

2.2 GHS label elements

Hazard pictograms

: RRHD Eclipse Plus C18



RRHD Eclipse Plus C8



RRHD Eclipse Plus Ph-Hex



Signal word

: RRHD Eclipse Plus C18
RRHD Eclipse Plus C8
RRHD Eclipse Plus Ph-Hex

Danger
Danger
Danger

Hazard statements

: RRHD Eclipse Plus C18

H225 - Highly flammable liquid and vapor.
H319 - Causes serious eye irritation.
H373 - May cause damage to organs through prolonged or repeated exposure. (blood system, central nervous system (CNS), kidneys, liver)
RRHD Eclipse Plus C8
H225 - Highly flammable liquid and vapor.
H319 - Causes serious eye irritation.
H373 - May cause damage to organs through prolonged or repeated exposure. (blood system, central nervous system (CNS), kidneys, liver)
RRHD Eclipse Plus Ph-Hex
H225 - Highly flammable liquid and vapor.
H319 - Causes serious eye irritation.
H373 - May cause damage to organs through prolonged or repeated exposure. (blood system, central nervous system (CNS), kidneys, liver)

Precautionary statements

Prevention

: RRHD Eclipse Plus C18

P280 - 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.
P233 - Keep container tightly closed.
P260 - Do not breathe vapor.
RRHD Eclipse Plus C8
P280 - 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

Section 2. Hazards identification

	RRHD Eclipse Plus Ph-Hex	<p>lighting equipment.</p> <p>P242 - Use non-sparking tools.</p> <p>P243 - Take action to prevent static discharges.</p> <p>P233 - Keep container tightly closed.</p> <p>P260 - Do not breathe vapor.</p> <p>P280 - Wear eye or face protection.</p> <p>P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.</p> <p>P241 - Use explosion-proof electrical, ventilating or lighting equipment.</p> <p>P242 - Use non-sparking tools.</p> <p>P243 - Take action to prevent static discharges.</p> <p>P233 - Keep container tightly closed.</p> <p>P260 - Do not breathe vapor.</p>
Response	: RRHD Eclipse Plus C18	<p>P314 - Get medical advice or attention if you feel unwell.</p> <p>P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.</p> <p>P337 + P313 - If eye irritation persists: Get medical advice or attention.</p>
	RRHD Eclipse Plus C8	<p>P314 - Get medical advice or attention if you feel unwell.</p> <p>P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.</p> <p>P337 + P313 - If eye irritation persists: Get medical advice or attention.</p>
	RRHD Eclipse Plus Ph-Hex	<p>P314 - Get medical advice or attention if you feel unwell.</p> <p>P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.</p> <p>P337 + P313 - If eye irritation persists: Get medical advice or attention.</p>
Storage	: RRHD Eclipse Plus C18	<p>P403 + P235 - Store in a well-ventilated place. Keep cool.</p>
	RRHD Eclipse Plus C8	<p>P403 + P235 - Store in a well-ventilated place. Keep cool.</p>
	RRHD Eclipse Plus Ph-Hex	<p>P403 + P235 - Store in a well-ventilated place. Keep cool.</p>
Disposal	: RRHD Eclipse Plus C18	<p>P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.</p>
	RRHD Eclipse Plus C8	<p>P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.</p>
	RRHD Eclipse Plus Ph-Hex	<p>P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.</p>
Supplemental label elements	: RRHD Eclipse Plus C18	<p>None known.</p>
	RRHD Eclipse Plus C8	<p>None known.</p>
	RRHD Eclipse Plus Ph-Hex	<p>None known.</p>

2.3 Other hazards

Section 2. Hazards identification

Hazards not otherwise classified	: RRHD Eclipse Plus C18	None known.
	RRHD Eclipse Plus C8	None known.
	RRHD Eclipse Plus Ph-Hex	None known.

Section 3. Composition/information on ingredients

This article, when used under reasonable conditions and in accordance with the directions for use, should not present a health hazard. The substance or mixture is encapsulated in the article. Only if released due to use or processing of the article in a manner not in accordance with the product's directions for use it may present potential health and safety hazards.

Substance/mixture	: RRHD Eclipse Plus C18	Mixture (encapsulated in article)
	RRHD Eclipse Plus C8	Mixture (encapsulated in article)
	RRHD Eclipse Plus Ph-Hex	Mixture (encapsulated in article)

Ingredient name	%	CAS number
RRHD Eclipse Plus C18 Acetonitrile	≥10 - <22	75-05-8
RRHD Eclipse Plus C8 Acetonitrile	≥10 - <22	75-05-8
RRHD Eclipse Plus Ph-Hex Acetonitrile	≥10 - <22	75-05-8

Contains: Organosilane bonded silica gel

Note: To the best of our knowledge, the acute and chronic toxicological properties of bonded silica gels have not been investigated. This product contains synthetic amorphous silica, and should not be confused with crystalline silica such as quartz, cristobalite, or tridymite, or with diatomaceous earth or other naturally occurring forms of amorphous silica that frequently contain crystalline forms of silica.

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	: RRHD Eclipse Plus C18	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.
	RRHD Eclipse Plus C8	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.
	RRHD Eclipse Plus Ph-Hex	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.

Section 4. First aid measures

Inhalation

: RRHD Eclipse Plus C18

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 following exposure or if feeling unwell. 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.

RRHD Eclipse Plus C8

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 following exposure or if feeling unwell. 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.

RRHD Eclipse Plus Ph-Hex

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 following exposure or if feeling unwell. 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.

Skin contact

: RRHD Eclipse Plus C18

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

RRHD Eclipse Plus C8

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

RRHD Eclipse Plus Ph-Hex

Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Continue to rinse for at least 10 minutes. Get

Section 4. First aid measures

Ingestion

: RRHD Eclipse Plus C18

RRHD Eclipse Plus C8

RRHD Eclipse Plus Ph-Hex

medical attention following exposure or if feeling unwell. Wash clothing before reuse. Clean shoes thoroughly before reuse.

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 following exposure or if feeling unwell. 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. 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 following exposure or if feeling unwell. 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. 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 following exposure or if feeling unwell. 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

: RRHD Eclipse Plus C18
RRHD Eclipse Plus C8
RRHD Eclipse Plus Ph-Hex

Causes serious eye irritation.
Causes serious eye irritation.
Causes serious eye irritation.

Inhalation

: RRHD Eclipse Plus C18
RRHD Eclipse Plus C8
RRHD Eclipse Plus Ph-Hex

No known significant effects or critical hazards.
No known significant effects or critical hazards.
No known significant effects or critical hazards.

Skin contact

: RRHD Eclipse Plus C18
RRHD Eclipse Plus C8
RRHD Eclipse Plus Ph-Hex

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	: RRHD Eclipse Plus C18 RRHD Eclipse Plus C8 RRHD Eclipse Plus Ph-Hex	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.
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Over-exposure signs/symptoms

Eye contact	: RRHD Eclipse Plus C18 RRHD Eclipse Plus C8 RRHD Eclipse Plus Ph-Hex	Adverse symptoms may include the following: pain or irritation watering redness Adverse symptoms may include the following: pain or irritation watering redness Adverse symptoms may include the following: pain or irritation watering redness
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Inhalation	: RRHD Eclipse Plus C18 RRHD Eclipse Plus C8 RRHD Eclipse Plus Ph-Hex	No specific data. No specific data. No specific data.
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Skin contact	: RRHD Eclipse Plus C18 RRHD Eclipse Plus C8 RRHD Eclipse Plus Ph-Hex	No specific data. No specific data. No specific data.
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Ingestion	: RRHD Eclipse Plus C18 RRHD Eclipse Plus C8 RRHD Eclipse Plus Ph-Hex	No specific data. No specific data. No specific data.
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4.3 Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician	: RRHD Eclipse Plus C18 RRHD Eclipse Plus C8 RRHD Eclipse Plus Ph-Hex	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. 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. 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.
Specific treatments	: RRHD Eclipse Plus C18 RRHD Eclipse Plus C8 RRHD Eclipse Plus Ph-Hex	No specific treatment. No specific treatment. No specific treatment.
Protection of first-aiders	: RRHD Eclipse Plus C18 RRHD Eclipse Plus C8 RRHD Eclipse Plus Ph-Hex	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. Fire-fighting measures

5.1 Extinguishing media

Suitable extinguishing media	: RRHD Eclipse Plus C18 RRHD Eclipse Plus C8 RRHD Eclipse Plus Ph-Hex	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	: RRHD Eclipse Plus C18 RRHD Eclipse Plus C8 RRHD Eclipse Plus Ph-Hex	Do not use water jet. Do not use water jet. Do not use water jet.

5.2 Special hazards arising from the substance or mixture

Specific hazards arising from the chemical	: RRHD Eclipse Plus C18 RRHD Eclipse Plus C8 RRHD Eclipse Plus Ph-Hex	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. 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. 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.
Hazardous thermal decomposition products	: RRHD Eclipse Plus C18 RRHD Eclipse Plus C8 RRHD Eclipse Plus Ph-Hex	Decomposition products may include the following materials: carbon dioxide carbon monoxide nitrogen oxides metal oxide/oxides cyanides Decomposition products may include the following materials: carbon dioxide carbon monoxide nitrogen oxides metal oxide/oxides cyanides Decomposition products may include the following materials: carbon dioxide carbon monoxide nitrogen oxides metal oxide/oxides cyanides

5.3 Advice for firefighters

Special protective actions for fire-fighters	: RRHD Eclipse Plus C18 RRHD Eclipse Plus C8	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. 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
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Section 5. Fire-fighting measures

	RRHD Eclipse Plus Ph-Hex	area if this can be done without risk. Use water spray to keep fire-exposed containers cool. 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	: RRHD Eclipse Plus C18	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
	RRHD Eclipse Plus C8	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
	RRHD Eclipse Plus Ph-Hex	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	: RRHD Eclipse Plus C18	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.
	RRHD Eclipse Plus C8	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.
	RRHD Eclipse Plus Ph-Hex	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.

Section 6. Accidental release measures

For emergency responders	: RRHD Eclipse Plus C18	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".
	RRHD Eclipse Plus C8	
	RRHD Eclipse Plus Ph-Hex	
6.2 Environmental precautions	: RRHD Eclipse Plus C18	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). 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). 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).
	RRHD Eclipse Plus C8	
	RRHD Eclipse Plus Ph-Hex	
6.3 Methods and materials for containment and cleaning up		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. 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. 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.
Methods for cleaning up	: RRHD Eclipse Plus C18	
	RRHD Eclipse Plus C8	
	RRHD Eclipse Plus Ph-Hex	

Section 7. Handling and storage

7.1 Precautions for safe handling

Protective measures : RRHD Eclipse Plus C18

Put on appropriate personal protective equipment (see Section 8). Do not breathe vapor or mist. Do not ingest. Avoid contact with eyes, skin and clothing. 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.

RRHD Eclipse Plus C8

Put on appropriate personal protective equipment (see Section 8). Do not breathe vapor or mist. Do not ingest. Avoid contact with eyes, skin and clothing. 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.

RRHD Eclipse Plus Ph-Hex

Put on appropriate personal protective equipment (see Section 8). Do not breathe vapor or mist. Do not ingest. Avoid contact with eyes, skin and clothing. 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 : RRHD Eclipse Plus C18

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.

Section 7. Handling and storage

RRHD Eclipse Plus C8

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.

RRHD Eclipse Plus Ph-Hex

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

: RRHD Eclipse Plus C18

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. 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.

RRHD Eclipse Plus C8

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. 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.

RRHD Eclipse Plus Ph-Hex

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Section 7. Handling and storage

7.3 Specific end use(s)

Recommendations	: RRHD Eclipse Plus C18 RRHD Eclipse Plus C8 RRHD Eclipse Plus Ph-Hex	Industrial applications, Professional applications. Industrial applications, Professional applications. Industrial applications, Professional applications.
Industrial sector specific solutions	: RRHD Eclipse Plus C18 RRHD Eclipse Plus C8 RRHD Eclipse Plus Ph-Hex	Not available. Not available. Not available.

Section 8. Exposure controls/personal protection

Since the hazardous ingredient in this article is encapsulated, the risk of exposure by inhalation, ingestion, skin contact and eyes contact is minimum.

8.1 Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
RRHD Eclipse Plus C18 Acetonitrile	ACGIH TLV (United States, 1/2021). Absorbed through skin. TWA: 20 ppm 8 hours. OSHA PEL 1989 (United States, 3/1989). TWA: 40 ppm 8 hours. TWA: 70 mg/m ³ 8 hours. STEL: 60 ppm 15 minutes. STEL: 105 mg/m ³ 15 minutes. NIOSH REL (United States, 10/2020). TWA: 20 ppm 10 hours. TWA: 34 mg/m ³ 10 hours. OSHA PEL (United States, 5/2018). TWA: 40 ppm 8 hours. TWA: 70 mg/m ³ 8 hours.
RRHD Eclipse Plus C8 Acetonitrile	ACGIH TLV (United States, 1/2021). Absorbed through skin. TWA: 20 ppm 8 hours. OSHA PEL 1989 (United States, 3/1989). TWA: 40 ppm 8 hours. TWA: 70 mg/m ³ 8 hours. STEL: 60 ppm 15 minutes. STEL: 105 mg/m ³ 15 minutes. NIOSH REL (United States, 10/2020). TWA: 20 ppm 10 hours. TWA: 34 mg/m ³ 10 hours. OSHA PEL (United States, 5/2018). TWA: 40 ppm 8 hours. TWA: 70 mg/m ³ 8 hours.
RRHD Eclipse Plus Ph-Hex Acetonitrile	ACGIH TLV (United States, 1/2021). Absorbed through skin. TWA: 20 ppm 8 hours. OSHA PEL 1989 (United States, 3/1989). TWA: 40 ppm 8 hours. TWA: 70 mg/m ³ 8 hours. STEL: 60 ppm 15 minutes. STEL: 105 mg/m ³ 15 minutes. NIOSH REL (United States, 10/2020).

Section 8. Exposure controls/personal protection

TWA: 20 ppm 10 hours.
TWA: 34 mg/m³ 10 hours.
OSHA PEL (United States, 5/2018).
TWA: 40 ppm 8 hours.
TWA: 70 mg/m³ 8 hours.

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. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

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. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves.

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	RRHD Eclipse Plus C18	Solid. (containing flammable liquid)
	RRHD Eclipse Plus C8	Solid. (containing flammable liquid)
	RRHD Eclipse Plus Ph-Hex	Solid. (containing flammable liquid)
Color	RRHD Eclipse Plus C18	White.
	RRHD Eclipse Plus C8	White.
	RRHD Eclipse Plus Ph-Hex	White.
Odor	RRHD Eclipse Plus C18	Not available.
	RRHD Eclipse Plus C8	Not available.
	RRHD Eclipse Plus Ph-Hex	Not available.
Odor threshold	RRHD Eclipse Plus C18	Not available.
	RRHD Eclipse Plus C8	Not available.
	RRHD Eclipse Plus Ph-Hex	Not available.
pH	RRHD Eclipse Plus C18	Not available.
	RRHD Eclipse Plus C8	Not available.
	RRHD Eclipse Plus Ph-Hex	Not available.
Melting point/freezing point	RRHD Eclipse Plus C18	Not available.
	RRHD Eclipse Plus C8	Not available.
	RRHD Eclipse Plus Ph-Hex	Not available.
Boiling point, initial boiling point, and boiling range	RRHD Eclipse Plus C18	Not available.
	RRHD Eclipse Plus C8	Not available.
	RRHD Eclipse Plus Ph-Hex	Not available.
Flash point	RRHD Eclipse Plus C18	Closed cup: -18 to 23°C (-0.4 to 73.4°F)
	RRHD Eclipse Plus C8	Closed cup: -18 to 23°C (-0.4 to 73.4°F)
	RRHD Eclipse Plus Ph-Hex	Closed cup: -18 to 23°C (-0.4 to 73.4°F)
Evaporation rate	RRHD Eclipse Plus C18	Not available.
	RRHD Eclipse Plus C8	Not available.
	RRHD Eclipse Plus Ph-Hex	Not available.
Flammability	RRHD Eclipse Plus C18	Contains: Flammable liquid
	RRHD Eclipse Plus C8	Contains: Flammable liquid
	RRHD Eclipse Plus Ph-Hex	Contains: Flammable liquid
Lower and upper explosion limit/flammability limit	RRHD Eclipse Plus C18	Not available.
	RRHD Eclipse Plus C8	Not available.
	RRHD Eclipse Plus Ph-Hex	Not available.

Vapor pressure	Ingredient name	Vapor Pressure at 20°C			Vapor pressure at 50°C		
		mm Hg	kPa	Method	mm Hg	kPa	Method
	RRHD Eclipse Plus C18						
	Acetonitrile	70.89	9.5				
	water	23.8	3.2		92.258	12.3	
	RRHD Eclipse Plus C8						
	Acetonitrile	70.89	9.5				
	water	23.8	3.2		92.258	12.3	
	RRHD Eclipse Plus Ph-Hex						
	Acetonitrile	70.89	9.5				
	water	23.8	3.2		92.258	12.3	


Section 9. Physical and chemical properties and safety characteristics

Relative vapor density	: RRHD Eclipse Plus C18	Not available.
	RRHD Eclipse Plus C8	Not available.
	RRHD Eclipse Plus Ph-Hex	Not available.
Relative density	: RRHD Eclipse Plus C18	Not available.
	RRHD Eclipse Plus C8	Not available.
	RRHD Eclipse Plus Ph-Hex	Not available.
Solubility	: RRHD Eclipse Plus C18	Mobile phase: Soluble Stationary phase: Insoluble
	RRHD Eclipse Plus C8	Mobile phase: Soluble Stationary phase: Insoluble
	RRHD Eclipse Plus Ph-Hex	Mobile phase: Soluble Stationary phase: Insoluble
Partition coefficient: n-octanol/water	:  RRHD Eclipse Plus C18	Not applicable.
	RRHD Eclipse Plus C8	Not applicable.
	RRHD Eclipse Plus Ph-Hex	Not applicable.

Auto-ignition temperature	: Ingredient name	°C	°F	Method
	 RRHD Eclipse Plus C18			
	Acetonitrile	524	975.2	
	RRHD Eclipse Plus C8			
	Acetonitrile	524	975.2	
	RRHD Eclipse Plus Ph-Hex			
	Acetonitrile	524	975.2	

Decomposition temperature	: RRHD Eclipse Plus C18	Not available.
	RRHD Eclipse Plus C8	Not available.
	RRHD Eclipse Plus Ph-Hex	Not available.
Viscosity	: RRHD Eclipse Plus C18	Not available.
	RRHD Eclipse Plus C8	Not available.
	RRHD Eclipse Plus Ph-Hex	Not available.

Particle characteristics

Median particle size	:  RRHD Eclipse Plus C18	Not applicable.
	RRHD Eclipse Plus C8	Not applicable.
	RRHD Eclipse Plus Ph-Hex	Not applicable.

Section 10. Stability and reactivity

10.1 Reactivity	: RRHD Eclipse Plus C18	No specific test data related to reactivity available for this product or its ingredients.
	RRHD Eclipse Plus C8	No specific test data related to reactivity available for this product or its ingredients.
	RRHD Eclipse Plus Ph-Hex	No specific test data related to reactivity available for this product or its ingredients.
10.2 Chemical stability	: RRHD Eclipse Plus C18	The product is stable.
	RRHD Eclipse Plus C8	The product is stable.
	RRHD Eclipse Plus Ph-Hex	The product is stable.
10.3 Possibility of hazardous reactions	: RRHD Eclipse Plus C18	Under normal conditions of storage and use, hazardous reactions will not occur.
	RRHD Eclipse Plus C8	Under normal conditions of storage and use, hazardous reactions will not occur.
	RRHD Eclipse Plus Ph-Hex	Under normal conditions of storage and use, hazardous reactions will not occur.

Section 10. Stability and reactivity

10.4 Conditions to avoid	: RRHD Eclipse Plus C18	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.
	RRHD Eclipse Plus C8	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.
	RRHD Eclipse Plus Ph-Hex	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.
10.5 Incompatible materials	: RRHD Eclipse Plus C18	Reactive or incompatible with the following materials: oxidizing materials
	RRHD Eclipse Plus C8	Reactive or incompatible with the following materials: oxidizing materials
	RRHD Eclipse Plus Ph-Hex	Reactive or incompatible with the following materials: oxidizing materials
10.6 Hazardous decomposition products	: RRHD Eclipse Plus C18	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
	RRHD Eclipse Plus C8	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
	RRHD Eclipse Plus Ph-Hex	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
RRHD Eclipse Plus C18 Acetonitrile	LC50 Inhalation Vapor LD50 Oral	Rat Rat	17100 ppm 2460 mg/kg	4 hours -
RRHD Eclipse Plus C8 Acetonitrile	LC50 Inhalation Vapor LD50 Oral	Rat Rat	17100 ppm 2460 mg/kg	4 hours -
RRHD Eclipse Plus Ph-Hex Acetonitrile	LC50 Inhalation Vapor LD50 Oral	Rat Rat	17100 ppm 2460 mg/kg	4 hours -

Irritation/Corrosion

Section 11. Toxicological information

Product/ingredient name	Result	Species	Score	Exposure	Observation
RRHD Eclipse Plus C18 Acetonitrile	Eyes - Moderate irritant	Rabbit	-	24 hours 100 uL 500 mg	-
	Skin - Mild irritant	Rabbit	-		-
RRHD Eclipse Plus C8 Acetonitrile	Eyes - Moderate irritant	Rabbit	-	24 hours 100 uL 500 mg	-
	Skin - Mild irritant	Rabbit	-		-
RRHD Eclipse Plus Ph-Hex Acetonitrile	Eyes - Moderate irritant	Rabbit	-	24 hours 100 uL 500 mg	-
	Skin - Mild irritant	Rabbit	-		-

Sensitization

Not available.

Mutagenicity

Conclusion/Summary : Not available.

Carcinogenicity

Conclusion/Summary : Not available.

Reproductive toxicity

Conclusion/Summary : Not available.

Teratogenicity

Conclusion/Summary : Not available.

Specific target organ toxicity (single exposure)

Not available.

Specific target organ toxicity (repeated exposure)

Name	Category	Route of exposure	Target organs
RRHD Eclipse Plus C18 Acetonitrile	Category 2	-	blood system, central nervous system (CNS), kidneys, liver
RRHD Eclipse Plus C8 Acetonitrile	Category 2	-	blood system, central nervous system (CNS), kidneys, liver
RRHD Eclipse Plus Ph-Hex Acetonitrile	Category 2	-	blood system, central nervous system (CNS), kidneys, liver

Aspiration hazard

Not available.

Section 11. Toxicological information

Information on the likely routes of exposure	: RRHD Eclipse Plus C18	Routes of entry anticipated: Oral, Dermal, Inhalation.
	RRHD Eclipse Plus C8	Routes of entry anticipated: Oral, Dermal, Inhalation.
	RRHD Eclipse Plus Ph-Hex	Routes of entry anticipated: Oral, Dermal, Inhalation.
<u>Potential acute health effects</u>		
Eye contact	: RRHD Eclipse Plus C18	Causes serious eye irritation.
	RRHD Eclipse Plus C8	Causes serious eye irritation.
	RRHD Eclipse Plus Ph-Hex	Causes serious eye irritation.
Inhalation	: RRHD Eclipse Plus C18	No known significant effects or critical hazards.
	RRHD Eclipse Plus C8	No known significant effects or critical hazards.
	RRHD Eclipse Plus Ph-Hex	No known significant effects or critical hazards.
Skin contact	: RRHD Eclipse Plus C18	No known significant effects or critical hazards.
	RRHD Eclipse Plus C8	No known significant effects or critical hazards.
	RRHD Eclipse Plus Ph-Hex	No known significant effects or critical hazards.
Ingestion	: RRHD Eclipse Plus C18	No known significant effects or critical hazards.
	RRHD Eclipse Plus C8	No known significant effects or critical hazards.
	RRHD Eclipse Plus Ph-Hex	No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact	: RRHD Eclipse Plus C18	Adverse symptoms may include the following: pain or irritation watering redness
	RRHD Eclipse Plus C8	Adverse symptoms may include the following: pain or irritation watering redness
	RRHD Eclipse Plus Ph-Hex	Adverse symptoms may include the following: pain or irritation watering redness
Inhalation	: RRHD Eclipse Plus C18	No specific data.
	RRHD Eclipse Plus C8	No specific data.
	RRHD Eclipse Plus Ph-Hex	No specific data.
Skin contact	: RRHD Eclipse Plus C18	No specific data.
	RRHD Eclipse Plus C8	No specific data.
	RRHD Eclipse Plus Ph-Hex	No specific data.
Ingestion	: RRHD Eclipse Plus C18	No specific data.
	RRHD Eclipse Plus C8	No specific data.
	RRHD Eclipse Plus Ph-Hex	No specific data.

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

Section 11. Toxicological information

General	: RRHD Eclipse Plus C18	May cause damage to organs through prolonged or repeated exposure.
	RRHD Eclipse Plus C8	May cause damage to organs through prolonged or repeated exposure.
	RRHD Eclipse Plus Ph-Hex	May cause damage to organs through prolonged or repeated exposure.
Carcinogenicity	: RRHD Eclipse Plus C18	No known significant effects or critical hazards.
	RRHD Eclipse Plus C8	No known significant effects or critical hazards.
	RRHD Eclipse Plus Ph-Hex	No known significant effects or critical hazards.
Mutagenicity	: RRHD Eclipse Plus C18	No known significant effects or critical hazards.
	RRHD Eclipse Plus C8	No known significant effects or critical hazards.
	RRHD Eclipse Plus Ph-Hex	No known significant effects or critical hazards.
Reproductive toxicity	: RRHD Eclipse Plus C18	No known significant effects or critical hazards.
	RRHD Eclipse Plus C8	No known significant effects or critical hazards.
	RRHD Eclipse Plus Ph-Hex	No known significant effects or critical hazards.

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)
RRHD Eclipse Plus C18 RRHD Eclipse Plus C18 Acetonitrile	2463.1 500	5418.7 1100	N/A N/A	54.2 11	N/A N/A
RRHD Eclipse Plus C8 RRHD Eclipse Plus C8 Acetonitrile	2463.1 500	5418.7 1100	N/A N/A	54.2 11	N/A N/A
RRHD Eclipse Plus Ph-Hex RRHD Eclipse Plus Ph-Hex Acetonitrile	2688.2 500	5914 1100	N/A N/A	59.1 11	N/A N/A

Section 12. Ecological information

12.1 Toxicity

Product/ingredient name	Result	Species	Exposure
RRHD Eclipse Plus C18 Acetonitrile	Acute IC50 3685000 µg/l Fresh water Acute LC50 3600000 µg/l Fresh water Acute LC50 1000000 µg/l Fresh water Chronic NOEC 1000000 µg/l Fresh water Chronic NOEC 160000 µg/l Fresh water	Aquatic plants - Lemna minor Daphnia - Daphnia magna Fish - Pimephales promelas Aquatic plants - Lemna minor Daphnia - Daphnia magna	96 hours 48 hours 96 hours 96 hours 21 days
RRHD Eclipse Plus C8 Acetonitrile	Acute IC50 3685000 µg/l Fresh water Acute LC50 3600000 µg/l Fresh water Acute LC50 1000000 µg/l Fresh water Chronic NOEC 1000000 µg/l Fresh water Chronic NOEC 160000 µg/l Fresh water	Aquatic plants - Lemna minor Daphnia - Daphnia magna Fish - Pimephales promelas Aquatic plants - Lemna minor Daphnia - Daphnia magna	96 hours 48 hours 96 hours 96 hours 21 days
RRHD Eclipse Plus Ph-Hex Acetonitrile	Acute IC50 3685000 µg/l Fresh water	Aquatic plants - Lemna minor	96 hours

Section 12. Ecological information

	Acute LC50 3600000 µg/l Fresh water Acute LC50 1000000 µg/l Fresh water Chronic NOEC 1000000 µg/l Fresh water Chronic NOEC 160000 µg/l Fresh water	Daphnia - Daphnia magna Fish - Pimephales promelas Aquatic plants - Lemna minor Daphnia - Daphnia magna	48 hours 96 hours 96 hours 21 days
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12.2 Persistence and degradability

Product/ingredient name	Test	Result	Dose	Inoculum
RRHD Eclipse Plus C18 Acetonitrile	OECD 310 Ready Biodegradability - CO ₂ in Sealed Vessels (Headspace Test)	70 % - Readily - 21 days	-	Activated sludge
RRHD Eclipse Plus C8 Acetonitrile	OECD 310 Ready Biodegradability - CO ₂ in Sealed Vessels (Headspace Test)	70 % - Readily - 21 days	-	Activated sludge
RRHD Eclipse Plus Ph-Hex Acetonitrile	OECD 310 Ready Biodegradability - CO ₂ in Sealed Vessels (Headspace Test)	70 % - Readily - 21 days	-	Activated sludge

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
RRHD Eclipse Plus C18 Acetonitrile	-	-	Readily
RRHD Eclipse Plus C8 Acetonitrile	-	-	Readily
RRHD Eclipse Plus Ph-Hex Acetonitrile	-	-	Readily

12.3 Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
RRHD Eclipse Plus C18 Acetonitrile	-0.34	3	low
RRHD Eclipse Plus C8 Acetonitrile	-0.34	3	low
RRHD Eclipse Plus Ph-Hex Acetonitrile	-0.34	3	low

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. Vapor from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. 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
RRHD Eclipse Plus C18 Acetonitrile (I,T)	75-05-8	Listed	U003
RRHD Eclipse Plus C8 Acetonitrile (I,T)	75-05-8	Listed	U003
RRHD Eclipse Plus Ph-Hex Acetonitrile (I,T)	75-05-8	Listed	U003

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

This Safety Data Sheet is written based on the encapsulated substance or mixture in this article. Since the hazardous ingredient is encapsulated, the risk of exposure by inhalation, ingestion, skin contact and eyes contact is minimum.

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

[Additional information](#)

Section 14. Transport information

Remarks : Special provisions

DOT: 47

TDG: 56

MX: 216

IATA: A46

IMDG: 216

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) PAIR**: Acetonitrile
TSCA 8(a) CDR Exempt/Partial exemption: Not determined
Clean Water Act (CWA) 307: Acetonitrile

Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs) : Listed

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


No products were found.

SARA 304 RQ : Not applicable.

SARA 311/312

Classification :  RRHD Eclipse Plus C18
 RRHD Eclipse Plus C8
 RRHD Eclipse Plus Ph-Hex
 FLAMMABLE LIQUIDS - Category 2
 EYE IRRITATION - Category 2A
 FLAMMABLE LIQUIDS - Category 2
 EYE IRRITATION - Category 2A
 FLAMMABLE LIQUIDS - Category 2
 EYE IRRITATION - Category 2A

Composition/information on ingredients

Name	%	Classification
 RRHD Eclipse Plus C18 Organosilane bonded silica gel Acetonitrile	≥50 - ≤75 ≥10 - <22	COMBUSTIBLE DUSTS FLAMMABLE LIQUIDS - Category 2 ACUTE TOXICITY (oral) - Category 4 ACUTE TOXICITY (dermal) - Category 4 ACUTE TOXICITY (inhalation) - Category 4 EYE IRRITATION - Category 2A SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2

Section 15. Regulatory information

RRHD Eclipse Plus C8 Organosilane bonded silica gel Acetonitrile	$\geq 50 - \leq 75$ $\geq 10 - < 22$	COMBUSTIBLE DUSTS FLAMMABLE LIQUIDS - Category 2 ACUTE TOXICITY (oral) - Category 4 ACUTE TOXICITY (dermal) - Category 4 ACUTE TOXICITY (inhalation) - Category 4 EYE IRRITATION - Category 2A SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2
RRHD Eclipse Plus Ph-Hex Organosilane bonded silica gel Acetonitrile	$\geq 50 - \leq 75$ $\geq 10 - < 22$	COMBUSTIBLE DUSTS FLAMMABLE LIQUIDS - Category 2 ACUTE TOXICITY (oral) - Category 4 ACUTE TOXICITY (dermal) - Category 4 ACUTE TOXICITY (inhalation) - Category 4 EYE IRRITATION - Category 2A SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2

SARA 313

	Product name	CAS number	%
Form R - Reporting requirements	RRHD Eclipse Plus C18 Acetonitrile	75-05-8	$\geq 10 - < 22$
	RRHD Eclipse Plus C8 Acetonitrile	75-05-8	$\geq 10 - < 22$
	RRHD Eclipse Plus Ph-Hex Acetonitrile	75-05-8	$\geq 10 - < 22$
Supplier notification	RRHD Eclipse Plus C18 Acetonitrile	75-05-8	$\geq 10 - < 22$
	RRHD Eclipse Plus C8 Acetonitrile	75-05-8	$\geq 10 - < 22$
	RRHD Eclipse Plus Ph-Hex Acetonitrile	75-05-8	$\geq 10 - < 22$

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: ACETONITRILE
New York	: The following components are listed: Acetonitrile; Ethanenitrile; Methyl cyanide
New Jersey	: The following components are listed: ACETONITRILE; METHYL CYANIDE; CYANOMETHANE
Pennsylvania	: The following components are listed: ACETONITRILE
California Prop. 65	

This product does not require a Safe Harbor warning under California Prop. 65.

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)




Section 15. Regulatory information

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 (CSCL) : All components are listed or exempted. Japan inventory (ISHL) : All components are listed or exempted.
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	: All components are listed or exempted.
United States	:  All components are active or exempted.
Viet Nam	: Not determined.

Section 16. Other information

[Procedure used to derive the classification](#)

Classification	Justification
RRHD Eclipse Plus C18 FLAMMABLE LIQUIDS - Category 2 EYE IRRITATION - Category 2A SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2	On basis of test data Calculation method Calculation method
RRHD Eclipse Plus C8 FLAMMABLE LIQUIDS - Category 2 EYE IRRITATION - Category 2A SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2	On basis of test data Calculation method Calculation method
RRHD Eclipse Plus Ph-Hex FLAMMABLE LIQUIDS - Category 2 EYE IRRITATION - Category 2A SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2	On basis of test data Calculation method Calculation method

[History](#)

Date of issue	: 04/01/2022
Date of previous issue	: 03/19/2019
Version	: 5
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

Section 16. Other information

📄 Indicates information that has changed from previously issued version.

[Notice to reader](#)

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