# SAFETY DATA SHEET

F93G509

## **Section 1. Identification**

Product name : MIL-DTL-64159C Type II 2K Water Reducible Polyurethane CARC Foliage Green

34160 Q1764

Product code : F93G509
Other means of : Not available.

identification Product type

: Liquid.

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

Paint or paint related material.

Manufacturer : THE SHERWIN-WILLIAMS COMPANY

101 W. Prospect Avenue Cleveland, OH 44115

National contact : Sherwin-Williams Canada Inc.

180 Brunel Road

Mississauga, Ontario L4Z 1T5 Canada

Emergency telephone number of the company

: US / Canada: (216) 566-2917

Mexico: SETIQ 800-00-214-00 / 55-5559-1588 Available 24 hours and 365 days a year

Product Information Telephone Number

: US / Canada: 1-844-290-6044

Mexico: Not Available

**Transportation Emergency** 

**Telephone Number** 

: US / Canada: (216) 566-2917

Mexico: SETIQ 800-00-214-00 / 55-5559-1588 Available 24 hours and 365 days a year

## Section 2. Hazards identification

Classification of the substance or mixture

: SKIN SENSITIZATION - Category 1 CARCINOGENICITY - Category 1A

TOXIC TO REPRODUCTION - Category 1B

Percentage of the mixture consisting of ingredient(s) of unknown acute toxicity: 2.3%

(dermal), 6% (inhalation)

**GHS label elements** 

Hazard pictograms





Signal word : Danger

**Hazard statements**: May cause an allergic skin reaction.

May cause cancer.

May damage fertility or the unborn child.

**Precautionary statements** 

**Prevention**: Obtain special instructions before use. Do not handle until all safety precautions have

been read and understood. Wear protective gloves, protective clothing and eye or face protection. Avoid breathing vapor. Contaminated work clothing must not be allowed out

of the workplace.

Date of issue/Date of revision : 4/18/2024 Date of previous issue : 1/22/2024 Version : 22.01 1/15

F93G509 MIL-DTL-64159C Type II 2K Water Reducible Polyurethane

CARC Foliage Green 34160 Q1764

## Section 2. Hazards identification

#### Response

: IF exposed or concerned: Get medical advice or attention. Wash contaminated clothing before reuse. IF ON SKIN: Wash with plenty of water. If skin irritation or rash occurs: Get medical advice or attention.

#### **Storage Disposal**

- Store locked up.
- Dispose of contents and container in accordance with all local, regional, national and international regulations.

#### Supplemental label elements

WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm. FOR INDUSTRIAL USE ONLY. This product must be mixed with other components before use. Before opening the packages, READ AND FOLLOW WARNING LABELS ON ALL COMPONENTS. Adequate ventilation required when sanding or abrading the dried film. If Adequate ventilation cannot be provided wear an approved particulate respirator (NIOSH approved). Follow respirator manufacturer's directions for respirator use. DELAYED EFFECTS FROM LONG TERM OVEREXPOSURE. Abrading or sanding of the dry film may release Crystalline Silica which has been shown to cause lung damage and cancer under long term exposure.

Please refer to the SDS for additional information. Keep out of reach of children. Do not transfer contents to other containers for storage.

Hazards not otherwise classified

: None known.

## Section 3. Composition/information on ingredients

Substance/mixture

: Mixture

Other means of identification

: Not available.

#### **CAS** number/other identifiers

Ingredient name	% by weight	<b>CAS</b> number
Titanium Dioxide	5.32	13463-67-7
Chromium Green Black	4.58	68909-79-5
1-Methyl-2-Pyrrolidone	3.68	872-50-4
Antimony Chromium Titanium Oxide	2.71	68186-90-3
Mercaptopropyl Trimethoxysilane	2.35	4420-74-0
Aluminum Chromium Cobalt Oxide	0.99	68187-11-1
Crystalline Silica, respirable powder	0.45	14808-60-7

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

#### **Description of necessary first aid measures**

**Eve contact** 

: 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

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. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may

2/15 Date of issue/Date of revision : 4/18/2024 Date of previous issue : 1/22/2024 Version: 22.01

MIL-DTL-64159C Type II 2K Water Reducible Polyurethane

#### Section 4. First aid measures

need to be kept under medical surveillance for 48 hours.

**Skin contact**: Wash with plenty of soap and water. Remove contaminated clothing and shoes. Wash

contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Get medical attention. In the event of any complaints or symptoms, avoid further exposure. Wash clothing before reuse. Clean

shoes thoroughly before reuse.

**Ingestion**: 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. 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 contactInhalationNo known significant effects or critical hazards.No known significant effects or critical hazards.

**Skin contact**: May cause an allergic skin reaction.

**Ingestion** : No known significant effects or critical hazards.

#### **Over-exposure signs/symptoms**

Eye contact : No specific data.

**Inhalation** : Adverse symptoms may include the following:

reduced fetal weight increase in fetal deaths skeletal malformations

**Skin contact**: Adverse symptoms may include the following:

irritation redness

reduced fetal weight increase in fetal deaths skeletal malformations

**Ingestion** : Adverse symptoms may include the following:

reduced fetal weight increase in fetal deaths skeletal malformations

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

Notes to physician : 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**: No specific treatment.

**Protection of first-aiders**: No action shall be taken involving any personal risk or without suitable training. If it is

suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water

before removing it, or wear gloves.

#### See toxicological information (Section 11)

Date of issue/Date of revision : 4/18/2024 Date of previous issue : 1/22/2024 Version : 22.01 3/15

# Section 5. Fire-fighting measures

#### **Extinguishing media**

Suitable extinguishing media

: Use an extinguishing agent suitable for the surrounding fire.

Unsuitable extinguishing

: None known.

# Specific hazards arising from the chemical

: In a fire or if heated, a pressure increase will occur and the container may burst.

Hazardous thermal decomposition products

: Decomposition products may include the following materials:

carbon dioxide carbon monoxide nitrogen oxides sulfur oxides metal oxide/oxides

# Special protective actions for fire-fighters

: 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.

# Special protective equipment for fire-fighters

: 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

#### Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

: 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. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

#### For emergency responders:

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".

#### **Environmental precautions**

: 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).

#### Methods and materials for containment and cleaning up

**Small spill** 

: Stop leak if without risk. Move containers from spill area. 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.

#### Large spill

F93G509

: Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

SHW-85-NA-GHS-CA

Date of issue/Date of revision : 4/18/2024 Date of previous issue : 1/22/2024 Version : 22.01 4/15

## Section 7. Handling and storage

#### **Precautions for safe handling**

#### **Protective measures**

Put on appropriate personal protective equipment (see Section 8). Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Avoid exposure - obtain special instructions before use. Avoid exposure during pregnancy. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not ingest. Avoid breathing vapor or mist. If during normal use the material presents a respiratory hazard, use only with adequate ventilation or wear appropriate respirator. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

#### Advice on general occupational hygiene

: 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

Store in accordance with local regulations. 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. 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.

# Section 8. Exposure controls/personal protection

#### **Control parameters**

Occupational exposure limits (OSHA United States)

Ingredient name	CAS#	Exposure limits
Titanium Dioxide	13463-67-7	OSHA PEL (United States, 5/2018).  TWA: 15 mg/m³ 8 hours. Form: Total dust  ACGIH TLV (United States, 1/2023).  TWA: 2.5 mg/m³ 8 hours. Form: respirable fraction, finescale particles
Chromium Green Black	68909-79-5	NIOSH REL (United States, 10/2020). [chromium (III) compounds as Cr]  TWA: 0.5 mg/m³, (as Cr) 8 hours.  OSHA PEL (United States, 5/2018). [Chromium (III) compounds (as Cr)]  TWA: 0.5 mg/m³, (as Cr) 8 hours.
1-Methyl-2-Pyrrolidone	872-50-4	OARS WEEL (United States, 4/2022).  Absorbed through skin.  TWA: 15 ppm 8 hours.  STEL: 120 mg/m³ 15 minutes.  STEL: 30 ppm 15 minutes.  TWA: 60 mg/m³ 8 hours.
Antimony Chromium Titanium Oxide	68186-90-3	ACGIH TLV (United States, 1/2023). [Antimony and compounds as Sb] TWA: 0.5 mg/m³, (as Sb) 8 hours. NIOSH REL (United States, 10/2020). [antimony] TWA: 0.5 mg/m³ 10 hours. OSHA PEL (United States, 5/2018). [Antimony and compounds (as Sb)]

Date of issue/Date of revision : 4/18/2024 Date of previous issue : 1/22/2024 Version: 22.01 SHW-85-NA-GHS-CA 5/15

<b>.</b>	•	
		TWA: 0.5 mg/m³, (as Sb) 8 hours.  ACGIH TLV (United States, 1/2023).
		[inorganic chromium III compounds as Cr]
		TWA: 0.003 mg/m³, (measured as Cr) 8
		hours. Form: Inhalable fraction
Mercaptopropyl Trimethoxysilane	4420-74-0	None.
Aluminum Chromium Cobalt Oxide	68187-11-1	NIOSH REL (United States, 10/2020).
		[chromium (III) compounds as Cr]
		TWA: 0.5 mg/m³, (as Cr) 8 hours.
		OSHA PEL (United States, 5/2018). [Chromium (III) compounds (as Cr)]
		TWA: 0.5 mg/m³, (as Cr) 8 hours.
		ACGIH TLV (United States, 1/2023). [cobalt
		and inorganic compounds as Co] Skin
		sensitizer. Inhalation sensitizer.
		TWA: 0.02 mg/m³, (as Co) 8 hours.
Crystalline Silica, respirable powder	14808-60-7	OSHA PEL Z3 (United States, 6/2016).
		TWA: 250 mppcf / (%SiO2+5) 8 hours. Form:
		Respirable
		TWA: 10 mg/m³ / (%SiO2+2) 8 hours. Form:
		Respirable
		OSHA PEL (United States, 5/2018). [Silica, crystalline]
		TWA: 50 μg/m³ 8 hours. Form: Respirable
		dust
		ACGIH TLV (United States, 1/2023). [Silica,
		crystalline]
		TWA: 0.025 mg/m³ 8 hours. Form:
		Respirable fraction
		NIOSH REL (United States, 10/2020).
		[SILICA, CRYSTALLINE (AS RESPIRABLE
		DUST)] TWA: 0.05 mg/m³ 10 hours. Form: respirable
		dust
		duot

#### Occupational exposure limits (Canada)

Ingredient name	CAS#	Exposure limits
N-Methyl pyrrolidone	872-50-4	CA Ontario Provincial (Canada, 6/2019). TWA: 400 mg/m³ 8 hours.
Aluminum Chromium Cobalt Oxide	68187-11-1	CA British Columbia Provincial (Canada, 6/2022). [hexavalent chromium compounds Inhalable. for water-soluble only] Absorbed through skin. Skin sensitizer. Inhalation sensitizer. Notes: No British Columbia exposure limit at this time
		CA Quebec Provincial (Canada, 6/2022). [aluminum and its compounds]  TWAEV: 5 mg/m³ 8 hours. Form: Respirable dust.  CA Alberta Provincial (Canada, 6/2018). [Chromium Metal and Cr III compounds as Cr]
		8 hrs OEL: 0.5 mg/m³, (as Cr) 8 hours. <b>CA Quebec Provincial (Canada, 6/2022).</b>

Date of issue/Date of revision

: 4/18/2024 Date of previous issue : 1/22/2024

Version: 22.01

6/15

		[Chromium (III) compounds]  TWAEV: 0.5 mg/m³, (as Cr) 8 hours.  CA British Columbia Provincial (Canada, 6/2022). [Cobalt and inorganic compounds as Co, Total] Skin sensitizer. Inhalation sensitizer.  TWA: 0.02 mg/m³, (as Co, Total) 8 hours.  CA Ontario Provincial (Canada, 6/2019). [Cobalt and inorganic compounds as Co]  TWA: 0.02 mg/m³, (as Co) 8 hours.  CA Saskatchewan Provincial (Canada, 7/2013). [Cobalt and inorganic compounds as Co]  STEL: 0.06 mg/m³, (measured as Co) 15 minutes.  TWA: 0.02 mg/m³, (measured as Co) 8 hours.
Quartz	14808-60-7	CA British Columbia Provincial (Canada, 6/2022). [Silica, Crystalline - alpha quartz and Cristobalite Respirable]  TWA: 0.025 mg/m³ 8 hours. Form: Respirable CA Quebec Provincial (Canada, 6/2022). [Silica Crystalline -Quartz]  TWAEV: 0.1 mg/m³ 8 hours. Form: Respirable dust. CA Alberta Provincial (Canada, 6/2018). 8 hrs OEL: 0.025 mg/m³ 8 hours. Form: Respirable particulate CA Ontario Provincial (Canada, 6/2019). [Silica, Crystalline (Quartz/Tripoli)]  TWA: 0.1 mg/m³ 8 hours. Form: Respirable particulate matter. CA Saskatchewan Provincial (Canada, 7/2013).  TWA: 0.05 mg/m³ 8 hours. Form: respirable fraction

#### Occupational exposure limits (Mexico)

Ingredient name	CAS#	Exposure limits
Aluminum Chromium Cobalt Oxide		NOM-010-STPS-2014 (Mexico, 4/2016). [Cobalt and inorganic compounds] TWA: 0.02 mg/m³, (as Co) 8 hours.

#### **Biological exposure indices (United States)**

Ingredient name	Exposure indices			
1-Methyl-2-Pyrrolidone	ACGIH BEI (United States, 1/2023)  BEI: 100 mg/l, 5-hydroxy-N-methyl- 2-pyrrolidone [in urine]. Sampling time: end of shift.			
Aluminum Chromium Cobalt Oxide	ACGIH BEI (United States, 1/2023) [cobalt and inorganic compounds including cobalt oxides]  BEI: 15 µg/I, not combined with tungsten carbide - cobalt [in urine]. Sampling time: end			

Date of issue/Date of revision

: 4/18/2024 Date of previous issue

: 1/22/2024

Version: 22.01

7/15

MIL-DTL-64159C Type II 2K Water Reducible Polyurethane CARC Foliage Green 34160 Q1764

of shift at end of workweek.

BEI: Nonquantitative: Biological monitoring should be considered for this compound based on the review; however, a specific BEI® could not be determined due to insufficient data., cobalt with tungsten carbide - cobalt [in urine]. Sampling time: end of shift at end of workweek.

#### **Biological exposure indices (Canada)**

No exposure indices known.

#### **Biological exposure indices (Mexico)**

Ingredient name	Exposure indices
1-Methyl-2-Pyrrolidone	Official Mexican STANDARD NOM- 047-SSA1-2011, Environmental Health- Biological exposure indices for personnel occupationally exposed to chemical substances. (Mexico, 6/2012) BEI: 100 mg/L, 5-hydroxy-n-methyl- 2-pyrrolidone [in urine]. Sampling time: at the end of the work shift.
Aluminum Chromium Cobalt Oxide	Official Mexican STANDARD NOM- 047-SSA1-2011, Environmental Health- Biological exposure indices for personnel occupationally exposed to chemical substances. (Mexico, 6/2012) [cobalt and its compounds]  BEI: 1 µg/I [Basal level.The determinant may be present in the biological sample obtained from subjects who have not been occupationally exposed, at a concentration that could affect the interpretation of the results. These background levels are included in the valu; semi-quantitative.The biological determinant is an indicator of chemical exposure, but the quantitative interpretation of the measure is ambiguous. These biological determinants should be used as a screening test if a quantitative test is not possible.], cobalt [in blood]. Sampling time: at the end of the shift at the end of the work week.  BEI: 15 µg/I [Basal level.The determinant may be present in the biological sample obtained from subjects who have not been occupationally exposed, at a concentration that could affect the interpretation of the results. These background levels are included in the valu], cobalt [in urine]. Sampling time: at the end of the shift at the end of the work week.

Date of issue/Date of revision

: 4/18/2024

Date of previous issue

: 1/22/2024

Version: 22.01

8/15

MIL-DTL-64159C Type II 2K Water Reducible Polyurethane

# Appropriate engineering controls

# : If user operations generate dust, fumes, gas, vapor 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. Contaminated work clothing should not be allowed out of the workplace. 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: safety glasses with sideshields.

#### **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

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

#### **Appearance**

Physical state : Liquid.
Color : Green.

Odor threshold : Not available.

Not available.

**pH** : 7.3

Melting point/freezing point : Not available.

Boiling point, initial boiling : 100°C (212°F)

point, and boiling range

Flash point : Closed cup: Not applicable.

Evaporation rate : 0.09 (butyl acetate = 1)

Date of issue/Date of revision : 4/18/2024 Date of previous issue : 1/22/2024 Version : 22.01 9/15

F93G509 MIL-DTL-64159C Type II 2K Water Reducible Polyurethane

CARC Foliage Green 34160 Q1764

# Section 9. Physical and chemical properties

**Flammability** : Not available. Lower and upper explosion : Lower: 2.2% limit/flammability limit Upper: 12.3%

Vapor pressure : 2.3 kPa (17.5 mm Hg)

Relative vapor density 1 [Air = 1] **Relative density** : 1.22

Solubility(ies)

Media	Result
cold water	Partially soluble

Partition coefficient: n-

octanol/water

: Not applicable.

**Auto-ignition temperature Decomposition temperature** 

: Not available. : Not available.

**Viscosity** 

Kinematic (40°C (104°F)): >20.5 mm<sup>2</sup>/s (>20.5 cSt)

Molecular weight Not applicable. **Heat of combustion** : 1.683 kJ/g

## Section 10. Stability and reactivity

Reactivity : No specific test data related to reactivity available for this product or its ingredients.

**Chemical stability** : The product is stable.

**Possibility of hazardous** 

reactions

: Under normal conditions of storage and use, hazardous reactions will not occur.

**Conditions to avoid** : No specific data.

Incompatible materials : No specific data.

**Hazardous decomposition** 

products

: 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
1-Methyl-2-Pyrrolidone	LD50 Dermal LD50 Oral		8 g/kg 3914 mg/kg	-

#### **Irritation/Corrosion**

Product/ingredient name	Result	Species	Score	Exposure	Observation
Titanium Dioxide	Skin - Mild irritant	Human	-	72 hours 300 ug l	-
1-Methyl-2-Pyrrolidone Mercaptopropyl Trimethoxysilane	Eyes - Moderate irritant Skin - Mild irritant	Rabbit Rabbit	-	100 mg 500 mg	-

#### **Sensitization**

Date of issue/Date of revision 10/15 : 4/18/2024 Date of previous issue : 1/22/2024 Version: 22.01

F93G509 MIL-DTL-64159C Type II 2K Water Reducible Polyurethane

CARC Foliage Green 34160 Q1764

# Section 11. Toxicological information

Not available.

#### **Mutagenicity**

Not available.

#### **Carcinogenicity**

Not available.

#### **Classification**

Product/ingredient name	OSHA	IARC	NTP
Titanium Dioxide	-	2B	-
Chromium Green Black	-	3	-
Antimony Chromium	-	3	-
Titanium Oxide			
Aluminum Chromium Cobalt	-	2B	Reasonably anticipated to be a human carcinogen.
Oxide			
Crystalline Silica, respirable	+	1	Known to be a human carcinogen.
powder			

#### Reproductive toxicity

Not available.

#### **Teratogenicity**

Not available.

#### Specific target organ toxicity (single exposure)

Name	Category	Route of exposure	Target organs
1-Methyl-2-Pyrrolidone	Category 3		Respiratory tract irritation

#### Specific target organ toxicity (repeated exposure)

Name	Category	Route of exposure	Target organs
Crystalline Silica, respirable powder	Category 1	inhalation	-

#### **Aspiration hazard**

Not available.

Information on the likely

routes of exposure

: Not available.

#### Potential acute health effects

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

**Skin contact**: May cause an allergic skin reaction.

**Ingestion**: No known significant effects or critical hazards.

#### Symptoms related to the physical, chemical and toxicological characteristics

**Eye contact** : No specific data.

**Inhalation** : Adverse symptoms may include the following:

reduced fetal weight increase in fetal deaths skeletal malformations

Date of issue/Date of revision : 4/18/2024 Date of previous issue : 1/22/2024 Version : 22.01 11/15

F93G509 MIL-DTL-64159C Type II 2K Water Reducible Polyurethane

CARC Foliage Green 34160 Q1764

# Section 11. Toxicological information

**Skin contact**: Adverse symptoms may include the following:

irritation redness

reduced fetal weight increase in fetal deaths skeletal malformations

**Ingestion** : Adverse symptoms may include the following:

reduced fetal weight increase in fetal deaths skeletal malformations

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

**Short term exposure** 

Potential immediate

: Not available.

effects

Potential delayed effects : Not available.

**Long term exposure** 

Potential immediate

: Not available.

effects

Potential delayed effects: Not available.

Potential chronic health effects

Not available.

General : Once sensitized, a severe allergic reaction may occur when subsequently exposed to

very low levels.

**Carcinogenicity**: May cause cancer. Risk of cancer depends on duration and level of exposure.

**Mutagenicity** : No known significant effects or critical hazards.

**Teratogenicity**: May damage the unborn child.

Developmental effects : No known significant effects or critical hazards.Fertility effects : No known significant effects or critical hazards.

#### **Numerical measures of toxicity**

**Acute toxicity estimates** 

Route	ATE value
Oral	17761.18 mg/kg

# Section 12. Ecological information

#### **Toxicity**

Product/ingredient name	Result	Species	Exposure
1-Methyl-2-Pyrrolidone	Acute LC50 1.23 ppm Fresh water	Daphnia - <i>Daphnia magna</i>	96 hours 48 hours 96 hours

#### Persistence and degradability

Not available.

Date of issue/Date of revision : 4/18/2024 Date of previous issue : 1/22/2024 Version : 22.01 12/15

F93G509 MIL-DTL-64159C Type II 2K Water Reducible Polyurethane

CARC Foliage Green 34160 Q1764

## Section 12. Ecological information

**Bioaccumulative potential** 

Not available.

**Mobility in soil** 

Soil/water partition coefficient (Koc)

: Not available.

Other adverse effects

: No known significant effects or critical hazards.

## Section 13. Disposal considerations

**Disposal methods** 

F93G509

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

# **Section 14. Transport information**

	DOT Classification	TDG Classification	Mexico Classification	IATA	IMDG
UN number	Not regulated.	Not regulated.	Not regulated.	Not regulated.	Not regulated.
UN proper shipping name	-	-	-	-	-
Transport hazard class(es)	-	-	-	-	-
Packing group	-	-	-	-	-
Environmental hazards	No.	No.	No.	No.	No.
Additional information	-	-	-	-	-

Date of issue/Date of revision : 4/18/2024 Date of previous issue : 1/22/2024 Version : 22.01 13/15

## **Section 14. Transport information**

Special precautions for user : Multi-modal shipping descriptions are provided for informational purposes and do not consider container sizes. The presence of a shipping description for a particular mode of transport (sea, air, etc.), does not indicate that the product is packaged suitably for that mode of transport. All packaging must be reviewed for suitability prior to shipment, and compliance with the applicable regulations is the sole responsibility of the person offering the product for transport. People loading and unloading dangerous goods must be trained on all of the risks deriving from the substances and on all actions in case of emergency situations.

Transport in bulk according: Not available. to IMO instruments

Proper shipping name

: Not available.

# Section 15. Regulatory information

**International regulations** 

**Montreal Protocol** 

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

International lists

: Australia inventory (AIIC): Not determined. China inventory (IECSC): Not determined. Japan inventory (CSCL): Not determined. Japan inventory (ISHL): Not determined. Korea inventory (KECI): Not determined.

New Zealand Inventory of Chemicals (NZIoC): Not determined.

Philippines inventory (PICCS): Not determined.

Taiwan Chemical Substances Inventory (TCSI): Not determined.

Thailand inventory: Not determined. Turkey inventory: Not determined. Vietnam inventory: Not determined.

## Section 16. Other information

**Hazardous Material Information System (U.S.A.)** 



The customer is responsible for determining the PPE code for this material. For more information on HMIS® Personal Protective Equipment (PPE) codes, consult the HMIS® Implementation Manual.

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings and the associated label are not required on SDSs or products leaving a facility under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered trademark and service mark of the American Coatings Association, Inc.

Procedure used to derive the classification

Classification	Justification
CARCINOGENICITY - Category 1A	Calculation method Calculation method Calculation method

#### **History**

Date of issue/Date of revision : 4/18/2024 Date of previous issue : 1/22/2024 Version: 22.01 14/15 F93G509 MIL-DTL-64159C Type II 2K Water Reducible Polyurethane SHW-85-NA-GHS-CA CARC Foliage Green 34160 Q1764

## Section 16. Other information

**Date of printing** : 4/18/2024 Date of issue/Date of

revision

: 4/18/2024

: 1/22/2024 Date of previous issue Version 22.01

: ATE = Acute Toxicity Estimate Key to abbreviations

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 SGG = Segregation Group **UN = United Nations** 

Indicates information that has changed from previously issued version.

#### Notice to reader

F93G509

It is recommended that each customer or recipient of this Safety Data Sheet (SDS) study it carefully and consult resources, as necessary or appropriate, to become aware of and understand the data contained in this SDS and any hazards associated with the product. This information is provided in good faith and believed to be accurate as of the effective date herein. However, no warranty, express or implied, is given. The information presented here applies only to the product as shipped. The addition of any material can change the composition, hazards and risks of the product. Products shall not be repackaged, modified, or tinted except as specifically instructed by the manufacturer, including but not limited to the incorporation of products not specified by the manufacturer, or the use or addition of products in proportions not specified by the manufacturer. Regulatory requirements are subject to change and may differ between various locations and jurisdictions. The customer/buyer/user is responsible to ensure that his activities comply with all country, federal, state, provincial or local laws. The conditions for use of the product are not under the control of the manufacturer; the customer/buyer/user is responsible to determine the conditions necessary for the safe use of this product. The customer/buyer/user should not use the product for any purpose other than the purpose shown in the applicable section of this SDS without first referring to the supplier and obtaining written handling instructions. Due to the proliferation of sources for information such as manufacturer-specific SDS, the manufacturer cannot be responsible for SDSs obtained from any other source.

Date of issue/Date of revision : 4/18/2024 Date of previous issue : 1/22/2024 Version: 22.01 15/15