



SAFETY DATA SHEET

Issuing Date: 22-Dec-2011

Revision Date: 21-Oct-2016

Revision Number: 1.1

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Product Code: 04909RUA-ULVOC

Product Name: 31136 A/C RED VHF 1.0 VOC ZENTHANE, MIL-DTL-53039E, TYPE IV

Hentzen Coatings, Inc.
6937 West Mill Road, Milwaukee, WI 53218-1225

Company Phone Number: 1-414-353-4200

Emergency telephone number ChemTrec 1-800-424-9300

Recommended use of the chemical and restrictions on use

Industrial paint (Paint or Paint-Related), Restricted to professional users

2. HAZARDS IDENTIFICATION

Classification

OSHA Regulatory Status

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)


Skin Corrosion/Irritation	Category 2
Flammable Liquids	Category 3

Label Elements

Emergency Overview

WARNING

Hazard Statements
Causes skin irritation
Flammable liquid and vapor



Appearance Opaque **Physical state** Liquid **Odor** Solvent

Precautionary Statements - Prevention

- Wash face, hands and any exposed skin thoroughly after handling
- Wear protective gloves/protective clothing/eye protection/face protection
- Keep away from heat/sparks/open flames/hot surfaces. - No smoking
- Keep container tightly closed
- Ground/Bond container and receiving equipment
- Use explosion-proof electrical/ ventilating/ lighting/ equipment
- Use only non-sparking tools
- Take precautionary measures against static discharge

- If skin irritation occurs: Get medical advice/attention
- IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower
- Wash contaminated clothing before reuse
- In case of fire: Use CO2, dry chemical, or foam for extinction

Precautionary Statements - Storage

Store in a well-ventilated place. Keep cool

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

Hazards not otherwise classified (HNOC)

Other information

- May be harmful if swallowed
- May be harmful in contact with skin
- Toxic to aquatic life

3. COMPOSITION/INFORMATION ON INGREDIENTS

Contains a known or suspected carcinogen

This product contains substances regulated as hazardous air pollutants (HAPS) under Section 112 of the Clean Air Act Amendments of 1990. See Section 15 for list of HAPS.

Chemical Name	CAS No	Weight-%	ACGIH	OSHA
BENZENE,1-CHLORO-4 (TRIFLUOROMETHYL)	98-56-6	30% - 40%	TWA: 2.5 mg/m ³ F	TWA: 2.5 mg/m ³ F
HOMOPOLYMER OF HEXAMETHYLENE DIISOCYANATE	28182-81-2	10% - 20%	N/A	N/A
AROMATIC HYDROCARBON	64742-94-5	5% - 10%	N/A	N/A
CHROME,NICKEL,ANTIMONY TITANIUM DIOXIDE PIGMENT	68186-90-3	5% - 10%	TWA: 0.5 mg/m ³ Sb TWA: 0.5 mg/m ³ Cr	TWA: 0.5 mg/m ³ Sb TWA: 0.5 mg/m ³ Cr
HEXAMETHYLENE DIISOCYANATE MONOMER	822-06-0	0% - 1%	TWA: 0.005 ppm	N/A

4. FIRST AID MEASURES

First Aid Measures

General advice	Immediate medical attention is required. Show this safety data sheet to the doctor in attendance.
Eye Contact	Immediately flush eyes with water for at least 15 minutes. Get medical attention. If easy to do, remove contact lenses. Keep eye wide open while rinsing. If symptoms persist, call a physician.
Skin Contact	Wash off immediately with soap and plenty of water. Consult a physician if necessary. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
Inhalation	Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation. Consult a physician if necessary. If breathing is irregular or stopped, administer artificial respiration. Asthma-like and/ or skin allergy-like symptoms.
Ingestion	Do NOT induce vomiting.
Self-protection of the first aider	Remove all sources of ignition.
Most important symptoms and effects, both acute and delayed	
Most Important Symptoms and Effects	No information available.
Indication of any immediate medical attention and special treatment needed	
Notes to physician	Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable Extinguishing Media No information available.

Specific hazards arising from the chemical

Flammable. Containers may explode when heated or if contaminated with water.

Explosion Data

Sensitivity to Mechanical Impact no data available.

Sensitivity to Static Discharge Yes.

Protective equipment and precautions for firefighters

Wear self-contained breathing apparatus and protective suit.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal Precautions

Evacuate personnel to safe areas. Ensure adequate ventilation. Remove all sources of ignition. Use personal protective equipment as required. Avoid breathing vapors or mists. Ventilate the area.

Other information

DECONTAMINATION SOLUTION: Concentrated ammonia (3 - 8%), detergent (2%) and water (90 - 95%), a solution of Union Carbide's Tergitol TMN-10 (20%) and water (80%) or a solution of 50% isopropanol, 45% water, and 5% concentrated ammonia solution(% by weight).

Environmental Precautions

Environmental Precautions

Prevent further leakage or spillage if safe to do so. Prevent product from entering drains. Do not flush into surface water or sanitary sewer system. Vapors are heavier than air, spread along floors and form explosive mixtures with air.

Methods and materials for containment and cleaning up

Methods for Containment

Prevent further leakage or spillage if safe to do so. Dike far ahead of liquid spill for later disposal. Decontaminate floor with decontamination solution letting stand for at least 15 minutes. Soak up with inert absorbent material.

Methods for Cleaning Up

Pick up and transfer to properly labeled containers. Dam up. Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Soak up with inert absorbent material.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling

Ensure adequate ventilation. Keep away from open flames, hot surfaces and sources of ignition. Take precautionary measures against static discharges. Use explosion-proof electrical (ventilation and lighting) equipment. Take necessary action to avoid static electricity discharge (which might cause ignition of organic vapors). To dissipate static electricity during transfer, ground drum and connect to receiving container with bonding strap. Use only non-sparking tools.

Conditions for safe storage, including any incompatibilities

Storage Conditions

Keep tightly closed in a dry and cool place. Keep in properly labeled containers. Keep away

from heat, sparks and flame. Protect from moisture.

Incompatible Products Water. Glycol ethers. Alcohols. Epoxies. Bases.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines

Chemical Name	ACGIH	OSHA	NIOSH IDLH
BENZENE, 1-CHLORO-4 (TRIFLUOROMETHYL) 98-56-6	TWA: 2.5 mg/m ³ F	TWA: 2.5 mg/m ³ F	
CHROME, NICKEL, ANTIMONY TITANIUM DIOXIDE PIGMENT 68186-90-3	TWA: 0.5 mg/m ³ Sb TWA: 0.5 mg/m ³ Cr	TWA: 0.5 mg/m ³ Sb TWA: 0.5 mg/m ³ Cr	IDLH: 50 mg/m ³ Sb IDLH: 25 mg/m ³ Cr(III) TWA: 0.5 mg/m ³ Sb TWA: 0.5 mg/m ³ Cr
IRON (III) OXIDE 1309-37-1	TWA: 5 mg/m ³ respirable particulate matter	TWA: 10 mg/m ³ fume TWA: 15 mg/m ³ total dust TWA: 5 mg/m ³ respirable fraction	IDLH: 2500 mg/m ³ Fe dust and fume TWA: 5 mg/m ³ Fe dust and fume
ORGANIC TIN COMPOUND 77-58-7	STEL: 0.2 mg/m ³ Sn TWA: 0.1 mg/m ³ Sn S*	TWA: 0.1 mg/m ³ Sn	IDLH: 25 mg/m ³ Sn TWA: 0.1 mg/m ³ except Cyhexatin Sn
HEXAMETHYLENE DIISOCYANATE MONOMER 822-06-0	TWA: 0.005 ppm	N/A	Ceiling: 0.020 ppm 10 min Ceiling: 0.140 mg/m ³ 10 min TWA: 0.005 ppm TWA: 0.035 mg/m ³

NIOSH IDLH: Immediately Dangerous to Life or Health

Exposure controls

Engineering Measures Persons allergic to isocyanates, and particularly those suffering from asthma or other respiratory conditions, should not work with isocyanates.

Individual protection measures, such as personal protective equipment

- Eye/Face Protection** Use personal protective equipment as required.
- Skin and Body Protection** Chemical resistant apron.
- Respiratory Protection** If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.

Hygiene Measures Do not eat, drink or smoke when using this product. Regular cleaning of equipment, work area and clothing is recommended.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state	Liquid	Appearance	Opaque
Odor	Solvent.	Odor Threshold	No data available
pH	No data available	Flash Point	100 °F / 38 °C
Decomposition temperature	No data available	Boiling Point	183 °F / 84 °C
Melting Point / Melting Range	No data available	Freezing Point	No data available
Vapor Pressure @20°C (kPa)	No data available	Partition coefficient:	No data available
Vapor Density	No data available	Density	No data available
Bulk density	No data available	Specific Gravity	1.18
Evaporation Rate	No data available	Water solubility	No data available
Dynamic viscosity	No data available	Weight per Gallon (lbs/gal):	9.79
		Flammability Limits in Air	
		Upper	3.81 %

Lower

0.33 %

10. STABILITY AND REACTIVITY

Reactivity

No data available

Chemical stability

Stable under recommended storage conditions.

Conditions to Avoid

Heat, flames and sparks.

Incompatible Materials

Water. Glycol ethers. Alcohols. Epoxies. Bases.

Hazardous Decomposition Products

Thermal decomposition can lead to release of irritating gases and vapors.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information	The product has not been tested
Inhalation	There is no data for this product.
Eye Contact	There is no data for this product.
Skin Contact	There is no data for this product.
Ingestion	There is no data for this product.

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
BENZENE,1-CHLORO-4 (TRIFLUOROMETHYL) 98-56-6	= 13 g/kg (Rat)	> 2 mL/kg (Rabbit)	= 33 mg/L (Rat) 4 h
HOMOPOLYMER OF HEXAMETHYLENE DIISOCYANATE 28182-81-2	N/A	N/A	= 18500 mg/m ³ (Rat) 1 h
CHROME,NICKEL,ANTIMONY TITANIUM DIOXIDE PIGMENT 68186-90-3	> 10000 mg/kg (Rat)	N/A	N/A
IRON (III) OXIDE 1309-37-1	> 10000 mg/kg (Rat)	N/A	N/A
ORGANIC TIN COMPOUND 77-58-7	= 45 mg/kg (Rat)	= 630 mg/kg (Rabbit)	N/A
HEXAMETHYLENE DIISOCYANATE MONOMER 822-06-0	= 710 µL/kg (Rat)	= 593 mg/kg (Rabbit)	= 0.06 mg/L (Rat) 4 h

Information on toxicological effects

Symptoms No information available.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Sensitization No information available.

MUTAGENIC EFFECTS No information available.

Carcinogenicity The table below indicates whether each agency has listed any ingredient as a carcinogen.

Chemical Name	ACGIH	IARC	NTP	OSHA
CHROME,NICKEL,ANTIMO	N/A	Group 3	N/A	N/A

NY TITANIUM DIOXIDE PIGMENT 68186-90-3				
IRON (III) OXIDE 1309-37-1	N/A	Group 3	N/A	N/A

Legend:

IARC (International Agency for Research on Cancer)
 Group 3 - Not Classifiable as to Carcinogenicity in Humans

Reproductive Toxicity	No information available.
Specific target organ systemic toxicity (single exposure)	No information available.
Specific target organ systemic toxicity (repeated exposure)	No information available.
Chronic Toxicity	Prolonged or repeated exposure increases the risk. May cause adverse liver effects.
Target Organ Effects	Central Vascular System (CVS), Eyes, Gastrointestinal tract (GI), Liver, Respiratory system, Skin.
Aspiration hazard	No information available.

Numerical measures of toxicity - Product Information

The following values are calculated based on chapter 3.1 of the GHS document .

ATEmix (oral)	3506 mg/kg
ATEmix (dermal)	2507 mg/kg
ATEmix (inhalation-dust/mist)	14.4 mg/l
Oral LD50	11587 mg/kg (rat) Estimated
Dermal LD50	4776 mg/kg (rat) Estimated
Inhalation LC50	51775 mg/l (mist) (dust) mg/m ³ Estimated
Inhalation LC50	

12. ECOLOGICAL INFORMATION

Ecotoxicity

Chemical Name	Toxicity to Algae	Toxicity to Fish	Toxicity to daphnia and other aquatic invertebrates
BENZENE,1-CHLORO-4 (TRIFLUOROMETHYL) 98-56-6	N/A	N/A	3.68: 48 h Daphnia magna mg/L EC50
HEXAMETHYLENE DIISOCYANATE MONOMER 822-06-0	N/A	26.1: 96 h Brachydanio rerio mg/L LC50 static	N/A

Persistence and degradability

No information available.

Bioaccumulation

No information available.

Chemical Name	Partition coefficient
BENZENE,1-CHLORO-4 (TRIFLUOROMETHYL) 98-56-6	3.7
AROMATIC HYDROCARBON 64742-94-5	6.1

Other adverse effects

No information available

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Waste treatment methods This material, as supplied, is a hazardous waste according to federal regulations (40 CFR 261).

US EPA Waste Number D001

This product contains one or more substances that are listed with the State of California as a hazardous waste.

Chemical Name	California Hazardous Waste Status
CHROME,NICKEL,ANTIMONY TITANIUM DIOXIDE PIGMENT 68186-90-3	Toxic Corrosive Ignitable
ORGANIC TIN COMPOUND 77-58-7	Toxic

14. TRANSPORT INFORMATION

DOT

UN-No UN1263
 Proper shipping name Paint
 Hazard class 3
 Packing Group III
 Special Provisions B1, B52, IB3, T2, TP1, TP29
 Description UN1263, Paint, 3, III
 Emergency Response Guide Number 128

TDG

UN-No UN1263
 Proper shipping name Paint
 Hazard class 3
 Packing Group III
 Description UN1263, Paint, 3, III

MEX

UN-No UN1263
 Proper shipping name Paint
 Hazard class 3
 Packing Group III
 Description UN1263, Paint, 3, III

ICAO

UN-No UN1263
 Proper shipping name Paint
 Hazard class 3
 Packing Group III
 Special Provisions A3, A72
 Description UN1263, Paint, 3, III

IATA

UN-No UN1263
 Hazard class 3
 Packing Group III
 ERG Code 3L
 Special Provisions A3, A72, A192

IMDG/IMO

UN-No UN1263
 Hazard class 3
 Packing Group III
 EmS-No F-E, S-E
 Special Provisions 163, 223, 367 955

RID

UN-No UN1263
 Proper shipping name Paint
 Hazard class 3
 Packing Group III
 Classification Code F1
 Description UN1263, Paint, 3, III

ADR/RID

UN-No UN1263
 Proper shipping name Paint
 Hazard class 3
 Packing Group III
 Classification Code F1
 Tunnel restriction code (D/E)
 Special Provisions 163, 640E, 650, 367
 Description UN1263, Paint, 3, III, (D/E)
 ADR/RID-Labels 3

ADN

Proper shipping name Paint
 Hazard class 3
 Packing Group III
 Classification Code F1
 Special Provisions 163, 640E, 650
 Description UN1263, Paint, 3, III
 Hazard Labels 3
 Limited Quantity (LQ) 5 L
 Ventilation VE01

15. REGULATORY INFORMATION

International Inventories

TSCA Complies
 DSL/NDSL Complies
 EINECS/ELINCS Complies
 ENCS Complies
 IECSC Complies
 KECL Complies
 PICCS Complies
 AICS Complies

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
 DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
 EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
 ENCS - Japan Existing and New Chemical Substances
 IECSC - China Inventory of Existing Chemical Substances
 KECL - Korean Existing and Evaluated Chemical Substances
 PICCS - Philippines Inventory of Chemicals and Chemical Substances
 AICS - Australian Inventory of Chemical Substances

US Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

Chemical Name	CAS No	SARA 313 - Threshold Values %
CHROME,NICKEL,ANTIMONY TITANIUM DIOXIDE PIGMENT	68186-90-3	1.0

SARA 311/312 Hazard Categories

Acute Health Hazard	Yes
Chronic Health Hazard	No
Fire Hazard	Yes
Sudden Release of Pressure Hazard	No
Reactive Hazard	No

CAA (Clean Air Act)

U.S. - CAA (Clean Air Act) - 1990 Hazardous Air Pollutants This product contains the following HAPs:

Chemical Name	CAS No	Hazardous air pollutants (HAPs) content
CHROME,NICKEL,ANTIMONY TITANIUM DIOXIDE PIGMENT	68186-90-3	Present

Clean Water Act

This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42):

Chemical Name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
CHROME,NICKEL,ANTIMONY TITANIUM DIOXIDE PIGMENT	N/A	X	N/A	N/A

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material

Chemical Name	Hazardous Substances RQs	Extremely Hazardous Substances RQs	RQ (reportable quantity)
HEXAMETHYLENE DIISOCYANATE MONOMER	100 lb	N/A	RQ 100 lb final RQ RQ 45.4 kg final RQ

State Regulations

California Proposition 65

This product does not contain any Proposition 65 chemicals

U.S. State Right-to-Know Regulations

Chemical Name	Massachusetts	New Jersey	Pennsylvania	Illinois	Rhode Island
BENZENE,1-CHLORO-4 (TRIFLUOROMETHYL)	N/A	X	N/A	N/A	X
CHROME,NICKEL,ANTIMONY TITANIUM DIOXIDE PIGMENT	N/A	X	X	X	X
IRON (III) OXIDE	X	X	X	N/A	X

International Regulations

Mexico - Grade

Moderate risk, Grade 2

Chemical Name	Carcinogenic Status	Exposure Limits
BENZENE,1-CHLORO-4 (TRIFLUOROMETHYL)	N/A	Mexico: TWA 2.5 mg/m ³
CHROME,NICKEL,ANTIMONY TITANIUM DIOXIDE PIGMENT	N/A	Mexico: TWA 0.5 mg/m ³
IRON (III) OXIDE	N/A	Mexico: TWA 5 mg/m ³ Mexico: STEL 10 mg/m ³
ORGANIC TIN COMPOUND	N/A	Mexico: TWA 0.1 mg/m ³ Mexico: STEL 0.2 mg/m ³

16. OTHER INFORMATION

NFPA Health Hazard 0 Flammability 2 Instability 0 Physical and Chemical Hazards -

NFPA Rating



HMIS Health Hazard 2 * Flammability 2 Physical Hazard 1 Personal protection X

Chronic Hazard Star Legend

** Chronic Health Hazard*

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Revision Note
No information available

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text. 04909RUA-ULVOC

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