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**Section 1 - PRODUCT AND COMPANY IDENTIFICATION**

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**Material Name**

MiraSTOP CG-F

**Product Use**

PU Injection Resin - Waterproofing

**Restrictions on Use**

For industrial use only.

**Manufacturer Information**

Carlisle Coatings and Waterproofing, Inc.  
900 Hensley Lane  
Wylie, TX 75098  
www.carlisleccw.com

**Phone Numbers:**

Medical Emergency

CHEMTREC (USA): 800-424-9300

MSDS Assistance: 972-442-6545

Technical Assistance: 888-229-2199

Customer Service: 888-229-0199

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**Section 2 - HAZARDS IDENTIFICATION**

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**Classification of the substance of mixture**



GHS08 Health hazard

Resp. Sens. 1 H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.  
Carc. 2 H351 Suspected of causing cancer.  
STOT RE 2 H373 May cause damage to organs through prolonged or repeated exposure.



GHS07

Acute Tox. 4 H332 Harmful if inhaled.  
Skin Irrit. 2 H315 Causes skin irritation.  
Eye Irrit. 2A H319 Causes serious eye irritation.  
Skin Sens. 1 H317 May cause an allergic skin reaction.  
STOT SE 3 H335 May cause respiratory irritation.

**GHS Label Elements**

The product is classified and labeled according to the Globally Harmonized System (GHS).

**Symbol(s)**



**GHS07**



**GHS08**

**Signal Word**

Danger

**Hazard-determining Components of Labeling**

methylenediphenyl diisocyanate  
diphenylmethanediisocyanate, isomeres and homologues  
Oxirane, methyl -, polymer with oxirane, ether with 1,2,3-propanetriol, polymer with 1,1-methylenebis(isocyanatobenzene)  
4,4'-methylenediphenyl diisocyanate

**Hazard Statement(s)**

Harmful if inhaled.  
Causes skin irritation.  
Causes serious eye irritation.  
May cause allergy or asthma symptoms or breathing difficulties if inhaled.  
May cause an allergic skin reaction.  
Suspected of causing cancer.  
May cause respiratory irritation.  
May cause damage to organs through prolonged or repeated exposure.

**Precautionary Statement(s)**

Do not breathe dust/fume/gas/mist/vapors/spray.  
[In case of inadequate ventilation] wear respiratory protection.  
Avoid breathing dust/fume/gas/mist/vapors/spray  
Wear protective gloves/protective clothing/eye protection/face protection.  
Wear protective gloves.  
Wear eye protection / face protection.  
Wash thoroughly after handling.  
Use only outdoors or in a well-ventilated area.  
Contaminated work clothing must not be allowed out of the workplace.  
Obtain special instructions before use.  
Do not handle until all safety precautions have been read and understood.  
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.  
Continue rinsing.  
Specific treatment (see on this label).  
If experiencing respiratory symptoms: Call a POISON CENTER/doctor.  
IF INHALED: Remove person to fresh air and keep comfortable for breathing.  
Call a POISON CENTER/doctor if you feel unwell.  
Wash contaminated clothing before reuse.  
If inhaled: If breathing is difficult, remove person to fresh air and keep comfortable for breathing.

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IF exposed or concerned: Get medical advice/attention.  
If skin irritation occurs: Get medical advice/attention.  
If skin irritation or rash occurs: Get medical advice/attention.  
If eye irritation persists: Get medical advice/attention.  
Get medical advice/attention if you feel unwell.  
IF ON SKIN: Wash with plenty of water.  
Take off contaminated clothing and wash it before reuse.  
Store in a well-ventilated place. Keep container tightly closed.  
Store locked up.  
Dispose of contents/container in accordance with local/regional/national/international regulations.

### Other Hazards

Results of PBT and vPvB assessment  
PBT: Not applicable.  
vPvB: Not applicable.

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## Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

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### Chemical characterization:

Mixtures

**Description:** Mixture of the substances listed below with nonhazardous additions.

CAS	Component Name	Percent
26447-40-5	methylenediphenyl diisocyanate	10-25
9016-87-9	diphenylmethanediisocyanate, isomeres and homologues	2.5-10
112898-48-3	Oxirane, methyl-, polymer with oxirane, ether with 1,2,3-propanetriol, polymer with 1,1-methylenebis(isocyanatobenzene)	2.5-10
101-68-8	4,4'-methylenediphenyl diisocyanate	2.5-10

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## Section 4 - FIRST AID MEASURES

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### Description of Necessary Measures

#### General information:

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

#### Inhalation

Supply fresh air and to be sure call for a doctor.

In case of unconsciousness place patient stably in side position for transportation.

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**Skin Contact**

Immediately wash with water and soap and rinse thoroughly.

**Eye Contact**

Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.

**Ingestion**

If symptoms persist consult doctor.

**Information for doctor**

**Most Important Symptoms/Effects, both acute and delayed**

No further relevant information available.

**Indication of any immediate medical attention and special treatment needed**

No further relevant information available.

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### Section 5 - FIRE FIGHTING MEASURES

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**Extinguishing Media**

**Suitable Extinguishing Media**

CO<sub>2</sub>, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

**Special Hazards Arising from the substance or mixture**

No further relevant information available.

**Fire Fighting Measures**

Mouth respiratory protective device.

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### Section 6 - ACCIDENTAL RELEASE MEASURES

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**Personal Precautions, Protective Equipment and Emergency Procedures**

Not required.

**Environmental Precautions**

Do not allow to enter sewers/ surface or ground water.

**Methods and Materials for Containment and Cleaning Up**

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust). Use neutralizing agent.

Dispose contaminated material as waste according to item 13.

Ensure adequate ventilation.

**Reference to other sections**

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

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**Protective Action Criteria for Chemicals**

**PAC-1:**

26447-40-5	methylenediphenyl diisocyanate	29 mg/m3
9016-87-9	diphenylmethanediisocyanate, isomeres and homologues	0.15 m/m3
101-68-8	4,4'-methylenediphenyl diisocyanate	0.45 mg/m3

**PAC-2:**

26447-40-5	methylenediphenyl diisocyanate	40 mg/m3
9016-87-9	diphenylmethanediisocyanate, isomeres and homologues	3.6 m/m3
101-68-8	4,4'-methylenediphenyl diisocyanate	5 mg/m3

**PAC-3:**

26447-40-5	methylenediphenyl diisocyanate	240 mg/m3
9016-87-9	diphenylmethanediisocyanate, isomeres and homologues	22 m/m3
101-68-8	4,4'-methylenediphenyl diisocyanate	55 mg/m3

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### Section 7 - HANDLING AND STORAGE

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**Precautions for Safe Handling**

Ensure good ventilation/exhaustion at the workplace.  
Prevent formation of aerosols.

**Information about Protection Against Explosions and Fires**

No special measures required.

**Conditions for Safe Storage, Including any Incompatibilities**

**Requirements to be met by storerooms and receptables**

No special requirements.

**Information about storage in one common storage facility**

Not required.

**Further information about storage conditions**

Keep receptacle tightly sealed.

**Specific end use(s)**

No further relevant information available.

## Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

### Component Exposure Limits

4,4'-methylenediphenyl diisocyanate	101-68-8
PEL:	Ceiling limit value: 0.2 mg/m <sup>3</sup> , 0.02 ppm
REL:	Long-term value: 0.05 mg/m <sup>3</sup> , 0.005 ppm
	Ceiling limit value: 0.2* mg/m <sup>3</sup> , 0.02* ppm *10-min
TLV:	Long-term value: 0.051 mg/m <sup>3</sup> , 0.005 ppm

### Additional information about design of technical systems

No further data; see item 7.

### Control Parameters

#### Components with Limit Values that Require Monitoring at the Workplace

The following constituent is the only constituent of the product which has a PEL, TLV or other recommended exposure limit.

At this time, the other constituents have no known exposure limits.

### Additional information

The lists that were valid during the creation were used as basis.

### Exposure controls

#### Personal Protective Equipment

#### General Protective and Hygienic Measures

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing.

Wash hands before breaks and at the end of work.

Avoid contact with the eyes and skin.

#### Breathing Equipment

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.

#### Protection of Hands

Protective gloves.

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation.

#### Material of Gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several

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substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

**Penetration Time of Glove Material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

**Eye Protection**

Tightly sealed goggles.

### Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

<b>Appearance</b>	Fluid	<b>Odor</b>	Characteristic
<b>Color</b>	Yellow tint	<b>Odor threshold</b>	Not determined
<b>pH</b>	Not determined	<b>Melting Point</b>	Undetermined
<b>Boiling Point</b>	Undetermined	<b>Flash Point</b>	Not applicable
<b>Flammability (solid, gaseous)</b>	Not applicable	<b>Ignition temperature</b>	400 °C (752 °F)
<b>Decomposition temperature</b>	Not determined	<b>Auto igniting</b>	Not applicable
<b>Danger of explosion</b>	Not applicable	<b>Lower Explosive Limit</b>	0.3 Vol %
<b>Upper Explosive Limit</b>	12.5 Vol %	<b>Density</b>	Not determined
<b>Relative density</b>	Not determined	<b>Vapor density</b>	Not determined
<b>Water Solubility</b>	Not miscible or difficult to mix	<b>Partition coefficient: n-octanol/water</b>	Not determined
<b>Viscosity Dynamic</b>	Not determined	<b>Kinematic</b>	Not determined
<b>Solvent content: Organic solvents</b>	0.0 %	<b>VOC content</b>	0.0 g/l/ 0.00 lb/gl

**Other Information**

No further relevant information available.

### Section 10 - STABILITY AND REACTIVITY

**Reactivity**

No further relevant information available.

**Thermal Decomposition / Conditions to be Avoided**

No decomposition if used according to specifications.

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**Possibility of Hazardous Reactions**

Reacts with water.

**Conditions to Avoid**

No further relevant information available.

**Incompatible Materials**

No further relevant information available.

**Hazardous Decomposition Products**

No dangerous decomposition products known.

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**Section 11 - TOXICOLOGICAL INFORMATION**

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**Information on Toxicological Effects****Primary Irritant Effect****Skin Contact**

Irritant to skin and mucous membranes.

**Eye Contact**

Irritating effect.

**Sensitization**

Sensitization possible through inhalation.

Sensitization possible through skin contact.

**Additional Toxicological Information**

The product shows the following dangers according to internally approved calculation methods for preparations:

Harmful

Irritant

**Acute and Chronic Toxicity****Component Analysis - LD/LC50**

The components of this material have been reviewed in various sources and the following selected endpoints are published:

methylenediphenyl diisocyanate

Oral LD50 Rat &gt;2000 mg/kg

Dermal LD50 Rabbit &gt;9400 mg/kg

diphenylmethanediisocyanate, isomeres and homologues

Oral LD50 Rat &gt;10000 mg/kg

Dermal LD50 Rabbit &gt;9400 mg/kg

Inhalation LC50/4 h Rat 0.49 mg/l

4,4'-methylenediphenyl diisocyanate

Oral LD50 Mouse 2200 mg/kg

Rat &gt;10000 mg/kg

Dermal LD50 Rabbit &gt;9400 mg/kg

Inhalation LC50/4 h Rat 0.49 mg/l



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**Component Carcinogenicity**

IARC:	diphenylmethanediisocyanate, isomeres and homologues	3
NTP:	None of the ingredients is listed.	
OSHA-Ca:	None of the ingredients is listed.	

IARC:	4,4'-methylenediphenyl diisocyanate	3
NTP:	None of the ingredients is listed.	
OSHA-Ca:	None of the ingredients is listed.	

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### Section 12 - ECOLOGICAL INFORMATION

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**Component Analysis - Aquatic Toxicity**

<b>methylenediphenyl diisocyanate</b>		26447-40-5
Fish:	LC50 96 hr zebrafish >1000 mg/l EC50/48 hr daphnia >1000 mg/l	
<b>diphenylmethanediisocyanate, isomeres and homologues</b>		9016-87-9
Fish:	EC50/24 h daphnia >1000 mg/l EC50/96 h fish >1000 mg/l EC50/72 h algae >1640 mg/l	
<b>4,4'-methylenediphenyl diisocyanate</b>		101-68-8
Fish:	LC50/96 h fish >1000 mg/l EC50/24 h daphnia >1000 mg/l	

**Persistence and Degradability**

No further relevant information available.

**Bioaccumulative Potential**

No further relevant information available.

**Mobility in Soil**

No further relevant information available.

**General Notes**

Water hazard class 1 (Self-assessment): slightly hazardous for water  
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

**Results of PBT and vPvB assessment**

**PBT:** Not applicable.

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**vPvB:** No applicable.

**Other Adverse Effects**

No further relevant information available.

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## Section 13 - DISPOSAL CONSIDERATIONS

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**Waste Treatment Methods**

Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

**Uncleaned Packagings**

Dispose of contents/container in accordance with local/regional/national/international regulations.

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## Section 14 - TRANSPORT INFORMATION

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**US DOT Information:**

UN/NA #: Not regulated

**IATA Information:**

UN/NA #: Not regulated

**IMDG Information:**

UN/NA #: Not regulated

**TDG Information:**

**US DOT**

UN/NA #: Not regulated

**IMDG**

UN/NA #: Not regulated

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## Section 15 - REGULATORY INFORMATION

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**U.S. Federal Regulations**

This material contains one or more of the following chemicals required to be identified under SARA Section 302 (40 CFR 355 Appendix A), SARA Section 313 (40 CFR 372.65), CERCLA (40 CFR 302.4), TSCA 12(b), and/or require an OSHA process safety plan.

di-"isononyl" phthalate	28553-12-0
methylenediphenyl diisocyanate	26447-40-5
diphenylmethanediisocyanate, isomeres and homologues	9016-87-9

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Oxirane, methyl-, polymer with oxirane, ether with 1,2,3-propanetriol, polymer with 1,1-methylenebis(isocyanatobenzene)	112898-48-3
4,4'-methylenediphenyl diisocyanate	101-68-8

**The following statement(s) are provided under the California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65):**

WARNING! This product contains a chemical known to the state of California to cause cancer.

di-“isononyl” phthalate	28553-12-0
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**Carcinogenic categories**

**EPA**

diphenylmethanediisocyanate, isomeres and homologues	9016-87-9	CBD
4,4'-methylenediphenyl diisocyanate	101-68-8	D, CBD

### Section 16 - OTHER INFORMATION

**HMIS Rating**

Health: \*2 Fire: 0 Reactivity: 0

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe \* = Chronic hazard

**NFPA Ratings**

Health: 1 Fire: 0 Reactivity: 0

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe

**Summary of Changes**

Revision Date: April 12, 2020

Revision Note: New

**Key / Legend**

ACGIH - American Conference of Governmental Industrial Hygienists; ADR - European Road Transport; AU - Australia; BOD - Biochemical Oxygen Demand; C - Celsius; CA - Canada; CAS - Chemical Abstracts Service; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CLP - Classification, Labelling, and Packaging; CN - China; CPR - Controlled Products Regulations; DFG - Deutsche Forschungsgemeinschaft; DOT - Department of Transportation; DSD - Dangerous Substance Directive; DSL - Domestic Substances List; EEC - European Economic Community; EINECS - European Inventory of Existing Commercial Chemical Substances; EPA - Environmental Protection Agency; EU - European Union; F - Fahrenheit; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; ICAO - International Civil Aviation Organization; IDL - Ingredient Disclosure List; IDLH - Immediately Dangerous to Life and Health; IMDG - International Maritime Dangerous Goods; JP - Japan; Kow - Octanol/water partition coefficient; KR - Korea; LEL - Lower Explosive Limit; LLV - Level Limit Value; LOLI - List Of Lists™ - ChemADVISOR’s Regulatory Database; MAK - Maximum Concentration Value in the Workplace;

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MEL - Maximum Exposure Limits; NFPA - National Fire Protection Agency; NIOSH - National Institute for Occupational Safety and Health; NJTSR - New Jersey Trade Secret Registry; NTP - National Toxicology Program; NZ - New Zealand; OSHA - Occupational Safety and Health Administration; PH - Philippines; RCRA - Resource Conservation and Recovery Act; REACH- Registration, Evaluation, Authorisation, and restriction of Chemicals; RID - European Rail Transport; SARA - Superfund Amendments and Reauthorization Act; STEL - Short-term Exposure Limit; TDG - Transportation of Dangerous Goods; TSCA - Toxic Substances Control Act; TWA - Time Weighted Average; UEL - Upper Explosive Limit; US - United States.

### **Other Information**

#### **Disclaimer:**

The information contained herein is based upon data and information available to us, and reflects our best professional judgment. This product may be formulated in part with components purchased from other companies. In many instances, especially when proprietary or trade secret materials are used, CCWI Company must rely upon the hazard evaluation of such components submitted by that product's manufacturer or importer. No warranty of merchantability, fitness for any use, or any other warranty is expressed or implied regarding the accuracy of such data or information. The results to be obtained from the use thereof, or that any such use does not infringe any patent, since the information contained herein may be applied under conditions of use beyond our control and with which we may be unfamiliar, we do not assume responsibility for the results of such application. This information is furnished upon the condition that the person receiving it shall make his own determination of the suitability of the material for his particular use.