

## Safety Data Sheet (SDS)

OSHA HazCom Standard 29 CFR 1910.1200(g) and GHS Rev 03.

Issue date 10/24/2015

Reviewed on 10/24/2015

### \* 1 Identification

- **Product Identifier**
- **Trade name:** NuFlo Ci-Fe
- **Product Number:** ofc-NG-CIMS
- **Relevant identified uses of the substance or mixture and uses advised against:**
- **Product Description** PC14 Metal surface treatment products, including galvanic and electroplating products
- **Details of the Supplier of the Safety Data Sheet:**
- **Manufacturer/Supplier:**  
NuGenTec Oilfield Chemicals  
1155 Park Avenue, Emeryville, CA 94608  
ofcadmin@nugentec.com  
888-996-8436 or 707-891-3012 for product information
- **Emergency telephone number:**  
PERS Emergency Response: Domestic and Canada - 1-800-633-8253, International 1-801-629-0667

www.nugentec.com/oilfield

### \* 2 Hazard(s) Identification

- **Classification of the substance or mixture:**



GHS07

Skin Irrit. 2 H315 Causes skin irritation.

Eye Irrit. 2B H320 Causes eye irritation.

- **Label elements:**
- **GHS label elements**  
The product is classified and labeled according to the Globally Harmonized System (GHS).
- **Hazard pictograms:**



GHS07

- **Signal word:** Warning
- **Hazard statements:**  
Causes skin and eye irritation.
- **Precautionary statements:**  
Wear protective gloves.  
Wash thoroughly after handling.  
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
Specific treatment (see supplementary first aid instructions on this Safety Data Sheet).  
If skin irritation occurs: Get medical advice/attention.  
If eye irritation persists: Get medical advice/attention.  
IF ON SKIN: Wash with plenty of water.  
Take off contaminated clothing and wash it before reuse.

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- **Classification system:**
- **NFPA ratings (scale 0 - 4)**



- **HMIS-ratings (scale 0 - 4)**



- **Hazard(s) not otherwise classified (HNOC):** None known

**\* 3 Composition/Information on Ingredients**

7732-18-5	Water, distilled water, deionized water	90-99%
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- **Chemical characterization: Mixtures**
- **Description:** Mixture of substances listed below with non-hazardous additions.

· <b>Dangerous Components:</b>			
102-71-6	Triethanolamine, TEA	⚠ Skin Irrit. 2, H315; Eye Irrit. 2B, H320	≤ 2,5%

**\* 4 First-Aid Measures**

- **Description of first aid measures:**
- **After inhalation:** In case of unconsciousness place patient stably in side position for transportation.
- **After skin contact:**  
Immediately wash with water and soap and rinse thoroughly.  
If skin irritation occurs, consult a doctor.
- **After eye contact:**  
Rinse opened eye for at least 15 minutes under running water. If symptoms persist, consult a doctor.
- **After swallowing:** If swallowed and symptoms occur, consult a doctor.
- **Information for doctor:**
- **Most important symptoms and 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.

**\* 5 Fire-Fighting Measures**

- **Extinguishing media:**
- **Suitable extinguishing agents:**  
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.
- **Advice for firefighters:**
- **Protective equipment:**  
As in any fire, wear self-contained breathing apparatus pressure-demand (NIOSH approved or equivalent) and full protective gear to prevent contact with skin and eyes.

**\* 6 Accidental Release Measures**

- **Personal precautions, protective equipment and emergency procedures:** Not required.
- **Environmental precautions:** Dilute with plenty of water.

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- **Methods and material for containment and cleaning up:**  
Absorb with liquid-binding material (i.e. sand, diatomite, acid binders, universal binders, sawdust).  
Dispose of the collected material according to regulations.
- **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.

**\* 7 Handling and Storage**

- **Handling**
- **Precautions for safe handling:** No special precautions are necessary if used correctly.
- **Information about protection against explosions and fires:** No special measures required.
- **Conditions for safe storage, including any incompatibilities:**
- **Storage**
- **Requirements to be met by storerooms and receptacles:** Store in the original container.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** No further relevant information available..
- **Specific end use(s):** No further relevant information available.

**\* 8 Exposure Controls/Personal Protection**

- **Additional information about design of technical systems:** No further data; see section 7.
- **Control parameters:**

<b>Components with occupational exposure limits:</b>	
<b>102-71-6 Triethanolamine, TEA</b>	
TLV	Long-term value: 5 mg/m <sup>3</sup>

- **Additional information:** The lists that were valid during the creation of this SDS were used as basis.
- **Exposure controls:**
- **Personal protective equipment:**
- **General protective and hygienic measures:**  
The usual precautionary measures for handling chemicals should be followed.  
Keep away from foodstuffs, beverages and feed.  
Immediately remove all soiled and contaminated clothing and wash before reuse.  
Wash hands before breaks and at the end of work.  
Avoid contact with the eyes and skin.
- **Breathing equipment:** Not required.
- **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.

Select glove material based on penetration times, rates of diffusion and 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 substances, the resistance of the glove material cannot be calculated in advance and has therefore to be checked prior to the application.

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· **Penetration time of glove material:**

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

· **Eye protection:**



Tightly sealed goggles

### \* 9 Physical and Chemical Properties

· **Information on basic physical and chemical properties**

· **General Information**

· **Appearance:**

<b>Form:</b>	Liquid
<b>Color:</b>	Pale yellow
· <b>Odor:</b>	Vinegar
· <b>Odor threshold:</b>	Not determined.

· **pH-value @ 20 °C (68 °F):** 10.2

· **Change in condition**

<b>Melting point/Melting range:</b>	Not determined.
<b>Boiling point/Boiling range:</b>	100 °C (212 °F)

· **Flash point:** None

· **Flammability (solid, gaseous):** Not applicable.

· **Ignition temperature:** Not determined

· **Decomposition temperature:** Not determined.

· **Auto igniting:** Product is not self-igniting.

· **Danger of explosion:** Product does not present an explosion hazard.

· **Explosion limits:**

<b>Lower:</b>	0.0 Vol %
<b>Upper:</b>	0.0 Vol %

· **Vapor pressure @ 20 °C (68 °F):** 23 hPa (17 mm Hg)

· **Density @ 20 °C (68 °F):** 1.005 g/cm<sup>3</sup> (8.387 lbs/gal)

· **Relative density:** Not determined.

· **Vapor density:** Not determined.

· **Evaporation rate:** Not determined.

· **Solubility in / Miscibility with:**

**Water:** Fully miscible.

· **Partition coefficient (n-octanol/water):** Not determined.

· **Viscosity:**

<b>Dynamic @ 20 °C (68 °F):</b>	1 mPas
<b>Kinematic:</b>	Not determined.

· **Solvent content:**

<b>Organic solvents:</b>	2.0 %
<b>Water:</b>	96.0 %

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- VOC content:** 2.0 %
- Solids content:** 1.0 %
- Other information:** No further relevant information available.

**\* 10 Stability and Reactivity**

- **Reactivity:** No further relevant information available.
- **Chemical stability:** Stable under normal conditions.
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions:** No dangerous reactions known.
- **Conditions to avoid:** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

**\* 11 Toxicological Information**

- **Information on toxicological effects:**
- **Acute toxicity:**

<b>LD/LC50 values that are relevant for classification:</b>		
<b>102-71-6 Triethanolamine, TEA</b>		
Oral	LD50	5530 mg/kg (rat) 2200 mg/kg (rabbit)
	LD50 Oral	2200 ml/kg (Guinea Pig) 5846 ml/kg (mouse)
Dermal	LD50	>22500 mg/kg (rabbit)

- **Primary irritant effect:**
- **On the skin:** Irritant to skin and mucous membranes.
- **On the eye:** Irritating effect.
- **Additional toxicological information:**  
The product shows the following dangers according to internally approved calculation methods for preparations:  
Irritant

· **Carcinogenic categories:**

<b>IARC (International Agency for Research on Cancer):</b>		
102-71-6	Triethanolamine, TEA	3

· **NTP (National Toxicology Program):**

None of the ingredients are listed.

· **OSHA-Ca (Occupational Safety & Health Administration):**

None of the ingredients are listed.

**\* 12 Ecological Information**

· **Toxicity:**

<b>Aquatic toxicity:</b>	
<b>102-71-6 Triethanolamine, TEA</b>	
EC50	609.98 mg/l (daphnia)

- **Persistence and degradability:** No further relevant information available.

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- **Behavior in environmental systems:**
- **Bioaccumulative potential:** No further relevant information available.
- **Mobility in soil:** No further relevant information available.
- **Additional ecological information:**
- **General notes:** Generally not hazardous for water.
- **Results of PBT and vPvB assessment:**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects:** No further relevant information available.

### \* 13 Disposal Considerations

- **Waste treatment methods:**
- **Recommendation:**  
Observe all federal, state and local environmental regulations when disposing of this material.
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.
- **Recommended cleansing agent:** Water, if necessary with cleansing agents.

### \* 14 Transport Information

- **UN-Number:**
- **DOT, ADR, ADN, IMDG, IATA** Non-Regulated Material
- **UN proper shipping name:**
- **DOT, ADR, ADN, IMDG, IATA** Non-Regulated Material
- **Transport hazard class(es):**
- **DOT, ADR, ADN, IMDG, IATA**
- **Class:** Non-Regulated Material
- **Packing group:**
- **DOT, ADR, IMDG, IATA** Non-Regulated Material
- **Environmental hazards:** Not applicable.
- **Special precautions for user:** Not applicable.
- **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code:** Not applicable.
- **UN "Model Regulation":** Non-Regulated Material

### \* 15 Regulatory Information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture:**
- **SARA (Superfund Amendments and Reauthorization):**

· <b>Section 355 (extremely hazardous substances):</b>
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None of the ingredients are listed.
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· <b>Section 313 (Specific toxic chemical listings):</b>
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None of the ingredients are listed.
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· <b>TSCA (Toxic Substances Control Act):</b>
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All ingredients are listed.
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· <b>California Proposition 65:</b>
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· <b>Chemicals known to cause cancer:</b>
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None of the ingredients are listed.
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<ul style="list-style-type: none"> <li>· <b>Chemicals known to cause reproductive toxicity for females:</b></li> </ul>
None of the ingredients are listed.
<ul style="list-style-type: none"> <li>· <b>Chemicals known to cause reproductive toxicity for males:</b></li> </ul>
None of the ingredients are listed.
<ul style="list-style-type: none"> <li>· <b>Chemicals known to cause developmental toxicity:</b></li> </ul>
None of the ingredients are listed.
<ul style="list-style-type: none"> <li>· <b>Carcinogenic categories:</b></li> </ul>
<ul style="list-style-type: none"> <li>· <b>EPA (Environmental Protection Agency):</b></li> </ul>
None of the ingredients are listed.
<ul style="list-style-type: none"> <li>· <b>TLV (Threshold Limit Value established by ACGIH):</b></li> </ul>
None of the ingredients are listed.
<ul style="list-style-type: none"> <li>· <b>NIOSH-Ca (National Institute for Occupational Safety and Health):</b></li> </ul>
None of the ingredients are listed.

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

- **Hazard pictograms:**



GHS07

- **Signal word:** Warning
- **Hazard statements:**  
Causes skin and eye irritation.
- **Precautionary statements:**  
Wear protective gloves.  
Wash thoroughly after handling.  
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
Specific treatment (see supplementary first aid instructions on this Safety Data Sheet).  
If skin irritation occurs: Get medical advice/attention.  
If eye irritation persists: Get medical advice/attention.  
IF ON SKIN: Wash with plenty of water.  
Take off contaminated clothing and wash it before reuse.

<ul style="list-style-type: none"> <li>· <b>National regulations:</b></li> </ul>
The product is subject to be classified according with the latest version of the regulations on hazardous substances.

<ul style="list-style-type: none"> <li>· <b>State Right to Know:</b></li> </ul>		
7732-18-5	Water, distilled water, deionized water	90-99%
64665-57-2	sodium 4(or 5)-methyl-1H-benzotriazolide ⚠ Skin Corr. 1C, H314; Eye Dam. 1, H318; ⚠ Acute Tox. 4, H302	≤ 2,5%
102-71-6	Triethanolamine, TEA ⚠ Skin Irrit. 2, H315; Eye Irrit. 2B, H320	≤ 2,5%
All ingredients are listed.		

- **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

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### \* 16 Other Information

The information and recommendations in this safety data sheet are, to the best of our knowledge, accurate as of the date of issue. Nothing herein shall be deemed to create warranty, expressed or implied, and shall not establish a legally valid contractual relationship. It is the responsibility of the user to determine applicability of this information and the suitability of the material or product for any particular purpose.

· **Date of preparation / last revision:** 10/24/2015 / 3

· **Abbreviations and acronyms:**

ADR: The European Agreement concerning the International Carriage of Dangerous Goods by Road

ADN: The European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

ACGIH: American Conference of Governmental Industrial Hygienists

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

VOC: Volatile Organic Compounds (USA, EU)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2

Eye Irrit. 2B: Serious eye damage/eye irritation, Hazard Category 2B

· **\* Data compared to the previous version altered.**

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