1 Identification

- **Product identifier**
  - **Trade name:** NuFlo DeScale 433
  - **Product number:** ngt NF DS 433
  - **Relevant identified uses of the substance or mixture and uses advised against**
  - **Product description:** Scale removal solution for Calcium Sulfate and Barium Sulfate.

- **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

2 Hazard(s) identification

- **Classification of the substance or mixture**
  - [GHS05 Corrosion]
    - Eye Dam. 1 H318 Causes serious eye damage.
    - **Hazard description:** Mild
    - **Information concerning particular hazards for human and environment:**
      - Not applicable.
      - The product has to be labeled due to the calculation procedure of international guidelines.
    - **Classification system:**
      - The classification was made according to the latest editions of international substances lists, and expanded upon from company and literature data.

- **Label elements**
  - **GHS label elements**
    - The product is classified and labeled according to the Globally Harmonized System (GHS).
  - **Hazard pictograms**
    - [GHS05]

- **Signal word** Danger

- **Hazard-determining components of labeling:**
  - Tetrasodium EDTA
  - **Hazard statements**
    - Causes serious eye damage.
  - **Precautionary statements**
    - Wear eye protection / face protection.
    - If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
    - Immediately call a poison center/doctor.
  - **Unknown acute toxicity:**
    - 18.4 percent of the mixture consists of ingredient(s) of unknown toxicity.

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Trade name: NuFlo DeScale 433

- Classification system:
  - NFPA ratings (scale 0 - 4)
    - Health = 2
    - Fire = 0
    - Reactivity = 0
  - HMIS-ratings (scale 0 - 4)
    - Health = 2
    - Fire = 0
    - Reactivity = 0
- Hazard(s) not otherwise classified (HNOC): None known

### 3 Composition/information on ingredients

<table>
<thead>
<tr>
<th>CAS/RTS</th>
<th>Name</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>144-55-8</td>
<td>Sodium Hydrogencarbonate</td>
<td>2-12%</td>
</tr>
<tr>
<td>7732-18-5</td>
<td>water, distilled water, deionized water</td>
<td>≥85%</td>
</tr>
</tbody>
</table>

- Chemical characterization: Mixtures
- Description: Mixture of substances listed below with nonhazardous additions.

### 4 First-aid measures

- Description of first aid measures
  - After inhalation: Supply fresh air; consult doctor in case of complaints.
  - After skin contact: If skin irritation continues, consult a doctor.
  - After eye contact: Rinse opened eye for several minutes under running water. Then 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:
    - CO₂, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
  - Special hazards arising from the substance or mixture
    - If incinerated, product will release the following toxic fumes: Oxides of Carbon, Sodium, Nitrogen (NOx) and Phosphorous.
- 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.
Trade name: NuFlo DeScale 433

- **Environmental precautions:**
  - Prevent from spreading (e.g. by damming-in or oil barriers).
  - Dilute with plenty of water.
  - Do not allow to enter sewers/ surface or ground water.
- **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**
  - Store away from strong acids, strong bases, strong oxidizing agents, reactive metals (Zinc & Aluminum) and their alloys (Brass, etc.), Copper and its alloys, Nickel and galvanized surfaces.
- **Storage:**
  - **Requirements to be met by storerooms and receptacles:** Store between 10 °C (50 °F) and 60 °C (140 °F).
  - **Information about storage in one common storage facility:** Not required.
  - **Further information about storage conditions:** None.
- **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**
  - All ventilation should be designed in accordance with OSHA standard (29 CFR 1910.94). Use local exhaust at filling zones and where leakage and dust formation is probable. Use mechanical (general) ventilation for storage areas. Use appropriate ventilation as required to keep Exposure Limits in Air below TLV & PEL limits.
- **Components with occupational exposure limits:**
  - The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
- **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.
      - 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.
      - **Breathing equipment:** Not required.
    - **Protection of hands:**
      - 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,
resistance of the glove material cannot 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 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:**
      - Form: Liquid
      - Color: Clear, colorless
      - Odor: Mild
      - Odor threshold: Not determined.
    - **pH-value @ 20 °C (68 °F):** 8

  - **Change in condition**
    - Melting point/Melting range: Not determined.
    - Boiling point/Boiling range: 100 °C (212 °F)

  - **Flash point:**
    - Not applicable.

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

  - **Ignition temperature:**
    - Decomposition temperature: Not determined.

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

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

  - **Explosion limits:**
    - Lower: 0.0 Vol %
    - Upper: 0.0 Vol %

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

  - **Density:**
    - 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:**
    - Dynamic: Not determined.
    - Kinematic: Not determined.

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Trade name: NuFlo DeScale 433

· Solvent content:
  · Organic solvents: 0.0 %
  · Water: 80.0 %
  · Solids content: 19.6 %
· 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:
  · Strong acids, strong bases, strong oxidizing agents, reactive metals (Zinc & Aluminum) and their alloys (Brass, etc.), Copper and its alloys, Nickel and galvanized surfaces.
· Hazardous decomposition products: Oxides of Carbon, Sodium, Nitrogen (NOx) and Phosphorous.

11 Toxicological information

· Information on toxicological effects
· Acute toxicity:
  · LD/LC50 values that are relevant for classification:
    · 64-02-8 Tetrasodium EDTA
      · Oral LD50 630-1260 mg/kg (rat)
  · Primary irritant effect:
    · on the skin: No irritating effect.
    · on the eye: Strong irritant with the danger of severe eye injury. Causes serious eye irritation.
    · Additional toxicological information:
      · The product shows the following dangers according to internally approved calculation methods for preparations:
        · Irritant

· Carcinogenic categories
· IARC (International Agency for Research on Cancer)
  · Group 1 - Carcinogenic to humans
  · Group 2A - Probably carcinogenic to humans
  · Group 2B - Possibly carcinogenic to humans
  · Group 3 - Not classifiable as to its carcinogenicity to humans
  · Group 4 - Probably not carcinogenic to humans

None of the ingredients are listed.

· 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: The hazards for the aquatic environment are unknown.

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Trade name: NuFlo DeScale 433

- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behavior in environmental systems:**
  - **Bioaccumulative potential** No further relevant information available.
  - **Mobility in soil** No further relevant information available.
- **Additional ecological information:**
  - **General notes:**
    Do not allow product to reach ground water, water course or sewage system.
    Danger to drinking water if even small quantities leak into the ground.
  - **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:** Small amounts may be diluted with plenty of water and washed away. Dispose of bigger amounts in accordance with Local Authority requirements.

- **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** Non-Regulated Material
- **Class**
  - **DOT, ADR, IMDG, IATA** 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":** -

### 15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
  - **Sara**
    - **Section 355 (extremely hazardous substances):** None of the ingredients are listed.
    - **Section 313 (Specific toxic chemical listings):** None of the ingredients are listed.
    - **TSCA (Toxic Substances Control Act):** All ingredients are listed.
Safety Data Sheet (SDS)
OSHA HazCom Standard 29 CFR 1910.1200(g) and GHS Rev 03.
Issue date 06/03/2015 Reviewed on 06/03/2015

Trade name: NuFlo DeScale 433

- **California Proposition 65**
  - **Chemicals known to cause cancer:** None of the ingredients are listed.
  - **Chemicals known to cause reproductive toxicity for females:** None of the ingredients are listed.
  - **Chemicals known to cause reproductive toxicity for males:** None of the ingredients are listed.
  - **Chemicals known to cause developmental toxicity:** None of the ingredients are listed.

- **Carcinogenic categories**
  - **EPA (Environmental Protection Agency)** None of the ingredients are listed.
  - **TLV (Threshold Limit Value established by ACGIH)** None of the ingredients are listed.
  - **NIOSH-Ca (National Institute for Occupational Safety and Health)** None of the ingredients are listed.

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

- **Hazard pictograms**

  GHS05

- **Signal word** Danger

- **Hazard-determining components of labeling:**
  - Tetrasodium EDTA

- **Hazard statements**
  - Causes serious eye damage.

- **Precautionary statements**
  - Wear eye protection / face protection.
  - If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
  - Immediately call a poison center/doctor.

- **National regulations:**
The product is subject to be classified according with the latest version of the regulations on hazardous substances.

- **State Right to Know**

  | CAS: 7732-18-5 | water, distilled water, deionized water | ≥85% |
  | CAS: 64-02-8 | Tetrasodium EDTA | 15-35% |
  | RTECS: AH 5075000 | Xn R22; Xi R41 | | Eye Dam. 1, H318; Acute Tox. 4, H302 |
  | CAS: 144-55-8 | Sodium Hydrogencarbonate | 2-12% |

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Trade name: NuFlo DeScale 433

| CAS: 2836-32-0 | Sodium Glycolate | ≤ 2.5% |
| CAS: 5324-84-5 | sodium octane-1-sulphonate monohydrate | ≤ 2.5% |

Xi R36/37/38
Skin Irrit. 2, H315; STOT SE 3, H335; Eye Irrit. 2B, H320

All ingredients are listed.

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

### 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** 06/03/2015 / 1
- **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)
  - LC50: Lethal concentration, 50 percent
  - LD50: Lethal dose, 50 percent
  - Acute Tox. 4: Acute toxicity, Hazard Category 4
  - Eye Dam. 1: Serious eye damage/eye irritation, Hazard Category 1
- **Data compared to the previous version altered.**

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