

## Safety Data Sheet (SDS)

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

Issue date 06/01/2015

Reviewed on 06/01/2015

### \* 1 Identification

- **Product identifier**
- **Trade name:** NuFlo 187
- **Product number:** ng-nf187
- **Relevant identified uses of the substance or mixture and uses advised against**  
Ultra heavy crude viscosity reducer - flow enhancer - asphaltene & paraffin treatment
- **Product description** PC35 Washing and cleaning products (including solvent based products)
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
NuGenTec Oilfield Chemicals  
1155 Park Avenue, Emeryville, CA 94608  
ofcadmin@nugentec.com [www.nugentec.com/oilfield](http://www.nugentec.com/oilfield)  
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**



GHS08 Health hazard

Asp. Tox. 1 H304 May be fatal if swallowed and enters airways.



GHS07

Skin Irrit. 2 H315 Causes skin irritation.

Eye Irrit. 2A H319 Causes serious eye irritation.

- **Label elements**

- **GHS label elements**

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

- **Hazard pictograms**



GHS07 GHS08

- **Signal word** Danger

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

Heavy naphtha distillates

Solvent naphtha (petroleum), medium aliph.

- **Hazard statements**

Causes skin irritation.

Causes serious eye irritation.

May be fatal if swallowed and enters airways.

- **Precautionary statements**

Wear protective gloves.

Wear eye protection / face protection.

Wash thoroughly after handling.

(Contd. on page 2)

## Safety Data Sheet (SDS)

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

Issue date 06/01/2015

Reviewed on 06/01/2015

**Trade name: NuFlo 187**

If swallowed: Immediately call a poison center/doctor.  
 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.  
 Do NOT induce vomiting.  
 If on skin: Wash with plenty of water.  
 Take off contaminated clothing and wash it before reuse.  
 Store locked up.  
 Dispose of contents/container in accordance with local/regional/national/international regulations.

· **Classification system:**

· **NFPA ratings (scale 0 - 4)**



· **HMS-ratings (scale 0 - 4)**

HEALTH	1	Health = 1
FIRE	2	Fire = 2
REACTIVITY	0	Reactivity = 0

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

### 3 Composition/information on ingredients

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

· **Dangerous Components:**

Heavy naphtha distillates ☠ Asp. Tox. 1, H304	25-50%
Solvent naphtha (petroleum), medium aliph. 🔥 Flam. Liq. 3, H226; ☠ Asp. Tox. 1, H304	25-50%
Trade Secret asphaltene flow enhancer ⚠ Skin Irrit. 2, H315; Eye Irrit. 2A, H319	5-10%
Mixture of surfactants ⚠ Acute Tox. 4, H302; Acute Tox. 4, H332; Skin Irrit. 2, H315; Eye Irrit. 2A, H319	≤ 2.5%
Trade Secret Asphaltene Dispersant ⚠ Skin Corr. 1B, H314; ⚠ Acute Tox. 4, H302; Acute Tox. 4, H312; Acute Tox. 4, H332; Flam. Liq. 4, H227	≤ 2.5%

### \* 4 First-aid measures

- **Description of first aid measures**
- **After inhalation:** In case of unconsciousness, place patient securely on 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.

(Contd. on page 3)

## Safety Data Sheet (SDS)

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

Issue date 06/01/2015

Reviewed on 06/01/2015

**Trade name: NuFlo 187**

- **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**  
Combustible liquid. Vapors can travel to a source of ignition and flash back.  
Explosive mixtures may occur at temperatures at or above flashpoint.
- **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:** 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 contaminated material as waste according to section 13.  
Ensure adequate ventilation.  
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**  
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**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** 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.

### \* 8 Exposure controls/personal protection

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

(Contd. on page 4)

## Safety Data Sheet (SDS)

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

Issue date 06/01/2015

Reviewed on 06/01/2015

**Trade name: NuFlo 187**

· **Control parameters**

· **Components with occupational exposure limits:**

Trade Secret Asphaltene Dispersant	
PEL	Long-term value: 6 mg/m <sup>3</sup> , 3 ppm
REL	Short-term value: 15 mg/m <sup>3</sup> , 6 ppm Long-term value: 8 mg/m <sup>3</sup> , 3 ppm
TLV	Short-term value: 15 mg/m <sup>3</sup> , 6 ppm Long-term value: 7.5 mg/m <sup>3</sup> , 3 ppm

· **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.

· **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:

Light yellow

· **Odor:**

Mild

(Contd. on page 5)

## Safety Data Sheet (SDS)

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

Issue date 06/01/2015

Reviewed on 06/01/2015

**Trade name: NuFlo 187**

- **Odor threshold:** Not determined.
- **pH-value:** Not determined.
- **Change in condition**
  - **Melting point/Melting range:** Not determined.
  - **Boiling point/Boiling range:** 153 °C (307 °F)
- **Flash point:** 70 °C (158 °F)
- **Flammability (solid, gaseous):** Not applicable.
- **Ignition temperature:** 265 °C (509 °F)
- **Decomposition temperature:** Not determined.
- **Auto igniting:** Product is not self-igniting.
- **Danger of explosion:** Product does not present an explosion hazard.
- **Explosion limits:**
  - **Lower:** 0.6 Vol %
  - **Upper:** 6.5 Vol %
- **Vapor pressure @ 20 °C (68 °F):** 6.6 hPa (5 mm Hg)
- **Density @ 20 °C (68 °F):** 0.866 g/cm<sup>3</sup> (7.227 lbs/gal)
- **Relative density** Not determined.
- **Vapor density** Not determined.
- **Evaporation rate** Not determined.
- **Solubility in / Miscibility with Water:** Not miscible or difficult to mix.
- **Partition coefficient (n-octanol/water):** Not determined.
- **Viscosity:**
  - **Dynamic @ 20 °C (68 °F):** 12 mPas
  - **Kinematic:** Not determined.
- **Solvent content:**
  - **Organic solvents:** 42.6 %
  - **VOC content:** 42.6 %
- **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:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

(Contd. on page 6)

## Safety Data Sheet (SDS)

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

Issue date 06/01/2015

Reviewed on 06/01/2015

**Trade name: NuFlo 187**

### \* 11 Toxicological information

· **Information on toxicological effects**

· **Acute toxicity:**

· **LD/LC50 values that are relevant for classification:**

<b>Heavy naphtha distillates</b>		
Dermal	LD50	>2000 mg/kg (rabbit)
<b>Solvent naphtha (petroleum), medium aliph.</b>		
Oral	LD50	>6500 mg/kg (rat)
Dermal	LD50	>3000 mg/kg (rab)
Inhalative	LC50/4 h	>14 mg/l (rat)
	LC50/48 hrs	800 mg/l (daphnia)
<b>Trade Secret asphaltene flow enhancer</b>		
Oral	LD50 Oral	3920 ml/kg (rat)
Dermal	LD50	3000 mg/kg (rabbit) Sensitization Skin For this family of materials, sensitization studies done in guinea pigs have been negative. Did not cause allergic skin reactions when tested in humans.
<b>Mixture of surfactants</b>		
Oral	LD50	1400 mg/kg (rat)
<b>Trade Secret Asphaltene Dispersant</b>		
Oral	LD50	2050 mg/kg (rat)
Dermal	LD50	1000 mg/kg (rabbit)

· **Primary irritant effect:**

· **on the skin:** Irritant to skin and mucous membranes.

· **on the eye:**

Irritating effect.

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)**

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.

(Contd. on page 7)

## Safety Data Sheet (SDS)

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

Issue date 06/01/2015

Reviewed on 06/01/2015

Trade name: NuFlo 187

### \* 12 Ecological information

· **Toxicity**

· <b>Aquatic toxicity:</b>	
<b>Heavy naphtha distillates</b>	
EC50	41 mg/l (Fathead Minnow)
<b>Trade Secret asphaltene flow enhancer</b>	
EC50	1.2 - 9.3 mg/l (Fathead Minnow)
<b>Mixture of surfactants</b>	
EC50	5.5 mg/l (Fathead Minnow)

- **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:** Recycle or dispose with household trash.
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.

### 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":** -

(Contd. on page 8)



## Safety Data Sheet (SDS)

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

Issue date 06/01/2015

Reviewed on 06/01/2015

**Trade name: NuFlo 187**

### \* 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):**

Heavy naphtha distillates

Solvent naphtha (petroleum), medium aliph.

Trade Secret asphaltene flow enhancer

Mixture of surfactants

Trade Secret Asphaltene Dispersant

· **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**



GHS07 GHS08

· **Signal word** Danger

· **Hazard-determining components of labeling:**

Heavy naphtha distillates

Solvent naphtha (petroleum), medium aliph.



## Safety Data Sheet (SDS)

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

Issue date 06/01/2015

Reviewed on 06/01/2015

**Trade name: NuFlo 187**

· **Hazard statements**

- Causes skin irritation.
- Causes serious eye irritation.
- May be fatal if swallowed and enters airways.

· **Precautionary statements**

- Wear protective gloves.
- Wear eye protection / face protection.
- Wash thoroughly after handling.
- If swallowed: Immediately call a poison center/doctor.
- 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.
- Do NOT induce vomiting.
- If on skin: Wash with plenty of water.
- Take off contaminated clothing and wash it before reuse.
- Store locked up.
- Dispose of contents/container in accordance with local/regional/national/international regulations.

· **National regulations:**

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

· **State Right to Know**

Heavy naphtha distillates ⚠ Asp. Tox. 1, H304	25-50%
Solvent naphtha (petroleum), medium aliph. ⚠ Flam. Liq. 3, H226; ⚠ Asp. Tox. 1, H304	25-50%
Trade Secret asphaltene flow enhancer ⚠ Skin Irrit. 2, H315; Eye Irrit. 2A, H319	5-10%
Non-Hazardous Coupling Agents	≤ 2.5%
Mixture of surfactants ⚠ Acute Tox. 4, H302; Acute Tox. 4, H332; Skin Irrit. 2, H315; Eye Irrit. 2A, H319	≤ 2.5%
Trade Secret Asphaltene Dispersant ⚠ Skin Corr. 1B, H314; ⚠ Acute Tox. 4, H302; Acute Tox. 4, H312; Acute Tox. 4, H332; Flam. Liq. 4, H227	≤ 2.5%
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** 06/01/2015 / 4

· **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

(Contd. on page 10)

## Safety Data Sheet (SDS)

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

Issue date 06/01/2015

Reviewed on 06/01/2015

**Trade name: NuFlo 187**

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  
Flam. Liq. 3: Flammable liquids, Hazard Category 3  
Flam. Liq. 4: Flammable liquids, Hazard Category 4  
Acute Tox. 4: Acute toxicity, Hazard Category 4  
Skin Corr. 1B: Skin corrosion/irritation, Hazard Category 1B  
Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2  
Eye Irrit. 2A: Serious eye damage/eye irritation, Hazard Category 2A  
Asp. Tox. 1: Aspiration hazard, Hazard Category 1

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

SDS created by MSDS Authoring Services [www.msdsauthoring.com](http://www.msdsauthoring.com) +1-877-204-9106