

SAFETY DATA SHEET

Section 1. Identification

Product name

: SpectraFloc™ 650M FLOCCULANT

™ a trademark of Baker Hughes Incorporated.

Product code

: SPC650M

Relevant identified uses of the substance or mixture and uses advised against

Identified uses

: Flocculant.

Print date

: 2/19/2016.

Validation date

: 2/19/2016.

Version

: 1.01

Supplier's details

: Baker Petrolite LLC 12645 W. Airport Blvd.

Sugar Land. TX 77478

For Product Information/SDSs Call: 800-231-3606

(8:00 a.m. - 5:00 p.m. CST, Monday - Friday) 281-276-5400

Emergency telephone number (with hours of

: CHEMTREC: 800-424-9300 (U.S. 24 hour)

Baker Petrolite: 800-231-3606

(001)281-276-5400

CANUTEC: 613-996-6666 (Canada 24 hours)

CHEMTREC Int'l 01-703-527-3887 (International 24 hour)

Section 2. Hazards identification

OSHA/HCS status

operation)

: This material is considered hazardous by the OSHA Hazard Communication Standard

(29 CFR 1910.1200).

Classification of the substance or mixture

: SKIN CORROSION/IRRITATION - Category 2

SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) [Narcotic effects] -

Category 3

GHS label elements

Hazard pictograms

Signal word

: Warning

Hazard statements

: Causes skin irritation.

May cause drowsiness and dizziness.

Precautionary statements

Prevention

: Wear protective gloves: > 8 hours (breakthrough time): Nitrile or Neoprene gloves.. Use

only outdoors or in a well-ventilated area. Avoid breathing vapor. Wash hands

thoroughly after handling.

Response

: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or physician if you feel unwell. IF ON SKIN: Wash

with plenty of soap and water. Take off contaminated clothing. Wash contaminated

clothing before reuse. If skin irritation occurs: Get medical attention.

Storage

: Store locked up.

Section 2. Hazards identification

Disposal

: Dispose of contents and container in accordance with all local, regional, national and international regulations.

Supplemental label elements

: Avoid contact with skin and clothing. Wash thoroughly after handling.

Hazards not otherwise classified

: Prolonged or repeated contact may dry skin and cause irritation.

Additional information

Product forms slippery surface when combined with water.

Section 3. Composition/information on ingredients

Substance/mixture

: Mixture

| Ingredient name | % | CAS number |
|-----------------------|---------|---------------|
| Petroleum distillates | 20 - 30 | 64742-47-8 |
| Alkoxylated alcohol | 1 - 5 | Trade secret. |

Section 4. First aid measures

Description of necessary first aid measures

Eye contact

: Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Continue to rinse for at least 10 minutes. Check for and remove any contact lenses. Get medical attention.

Inhalation

: Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If necessary, call a poison center or physician. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

Skin contact

: Wash skin thoroughly with soap and water or use recognized skin cleanser. Remove contaminated clothing and shoes. Continue to rinse for at least 10 minutes. Get medical attention. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Ingestion

: Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention. If necessary, call a poison center or physician. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt

or waistband.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact

: Causes serious eye irritation.

Inhalation

: Can cause central nervous system (CNS) depression. May cause drowsiness and dizziness. Exposure to decomposition products may cause a health hazard. Serious

effects may be delayed following exposure.

Skin contact

: Causes skin irritation. Defatting to the skin.

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Section 4. First aid measures

Ingestion

: Can cause central nervous system (CNS) depression. Irritating to mouth, throat and stomach.

Over-exposure signs/symptoms

Eye contact

: pain or irritation, watering, redness

Inhalation

: nausea or vomiting, headache, drowsiness/fatigue, dizziness/vertigo, unconsciousness

Skin contact

: irritation,redness,dryness,cracking

Ingestion

: No specific data.

Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician

: In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

Specific treatments

: No specific treatment.

Protection of first-aiders

: No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

See toxicological information (Section 11)

Additional information

If product is ingested and vomiting occurs naturally, have person lean forward to reduce the risk of aspiration into the lungs.

Section 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media

: Use an extinguishing agent suitable for the surrounding fire.

Unsuitable extinguishing

media

: None known.

Specific hazards arising from the chemical

: In a fire or if heated, a pressure increase will occur and the container may burst.

Hazardous thermal decomposition products : carbon dioxide,carbon monoxide,nitrogen oxides,halogenated compounds

Special protective actions for fire-fighters

: Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

: No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders: If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For nonemergency personnel".

Section 6. Accidental release measures

Environmental precautions

: Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods and materials for containment and cleaning up

Small spill

: Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Large spill

: Stop leak if without risk. Move containers from spill area. Approach release from upwind. Dike spill area and do not allow product to reach sewage system or surface or ground water. Notify any reportable spill to authorities. (See section 12 for environmental risks and 13 for disposal information.) Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with noncombustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

If RQ (Reportable Quantity) is exceeded, report to National Spill Response Office at 1-800-424-8802. Additional information

Spilled material becomes very slippery when wet. Sweep up spills and place in a waste disposal container. Flush the area thoroughly with water and scrub to remove residue. If area is still slippery, apply dry absorbent compound and sweep up the mixture and place in a waster disposal container. Do not flush large quantities of the material to the sewer.

Section 7. Handling and storage

Precautions for safe handling

Protective measures

: Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapor or mist. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Keep in the original container or an approved alternative made from a compatible material. kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

Advice on general occupational hygiene : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

including any incompatibilities

Conditions for safe storage, : Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

Section 8. Exposure controls/personal protection

Control parameters

| Occupational exposure limit | s | TWA (| 8 hours) | | STEL (| 15 mins | s) | Ceilin | g | | |
|---|-----------|-------|----------|-------|--------|---------|-------|--------|-------|-------|-----------|
| Ingredients: | List name | ppm | mg/m³ | Other | ppm | mg/m³ | Other | ppm | mg/m³ | Other | Notations |
| Petroleum distillates, as total hydrocarbon vapor | US ACGIH | - | 200 | - | - | - | - | - | - | - | [1] |

Section 8. Exposure controls/personal protection

[1]Absorbed through skin.

Consult local authorities for acceptable exposure limits.

Only components of this product with established exposure limits appear in the box above.

If OSHA permissible exposure levels are shown above they are the OSHA 1989 levels or are from subsequent OSHA regulatory actions. Although the 1989 levels have been vacated the 11th Circuit Court of Appeals, Baker Hughes recommends that these lower exposure levels be observed as reasonable worker protection.

Appropriate engineering

controls

: Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

Individual protection measures

Hygiene measures

: Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection

Respiratory protection

: Wear chemical safety goggles. When transferring material wear face-shield in addition

to chemical safety goggles.

Hand protection

: Chemical-resistant gloves: Nitrile or Neoprene gloves.

Skin protection

: Wear long sleeves to prevent repeated or prolonged skin contact.

: If a risk assessment indicates it is necessary, use a properly fitted, air purifying or supplied air respirator complying with an approved standard. Respirator selection must

be based on known or anticipated exposure levels, the hazards of the product and the

safe working limits of the selected respirator.

Section 9. Physical and chemical properties

Appearance

Physical state : Liquid. [Viscous.]

Color : Milky.

Odor : Aliphatic solvent. Odor threshold : Not available.

: 4 to 7 [Conc. (% w/w): 5%] pΗ

: 5 g/L

Melting/freezing point : Not available. **Boiling point** : Not available. **Initial Boiling Point** : Not available. Flash point : Not available. : Not applicable. **Burning time Burning rate** : Not applicable. **Evaporation rate** : Not available.

Flammability (solid, gas)

: Slightly flammable in the presence of the following materials or conditions: open flames, sparks and static discharge and heat.

Lower and upper explosive

(flammable) limits

: Not available.

Vapor pressure : Not available. Vapor density : <1 [Air = 1] Relative density : 1.04 (15.6°C) Density : 8.6632 (lbs/gal)

Section 9. Physical and chemical properties

Solubility in water

: Slight

Partition coefficient: n-

: Not available.

octanol/water

Auto-ignition temperature **Decomposition temperature**

: Not available. : Not available.

Viscosity

: Not available.

VOC

Pour Point

: Not available.

: Not available.

Section 10. Stability and reactivity

Reactivity

: No specific test data related to reactivity available for this product or its ingredients.

Chemical stability

: The product is stable.

Possibility of hazardous

reactions

: Under normal conditions of storage and use, hazardous reactions will not occur.

Conditions to avoid

: No specific data.

Incompatible materials

: Reactive or incompatible with the following materials: oxidizing materials.

Hazardous decomposition

products

: Under normal conditions of storage and use, hazardous decomposition products should

not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

| Product/ingredient name | Result | Species | Dose | Exposure |
|--|------------------------|---------|----------------------------|----------|
| Petroleum distillates SpectraFloc™ 650M FLOCCULANT | LD50 Oral LD50 Oral | | >5000 mg/kg >5000 mg/kg | - |

Irritation/Corrosion

No applicable toxicity data

Sensitization

No applicable toxicity data

Mutagenicity

No applicable toxicity data

Carcinogenicity

No applicable toxicity data

Reproductive toxicity

No applicable toxicity data

Teratogenicity

No applicable toxicity data

Specific target organ toxicity (single exposure)

Section 11. Toxicological information

| Name | 1 | Route of exposure | Target organs |
|-----------------------|------------|-------------------|------------------|
| Petroleum distillates | Category 3 | Not applicable. | Narcotic effects |

Specific target organ toxicity (repeated exposure)

Not applicable.

Aspiration hazard

| Name | Result |
|-----------------------|--------------------------------|
| Petroleum distillates | ASPIRATION HAZARD - Category 1 |

Information on the likely routes of exposure

: Routes of entry anticipated: Dermal, Inhalation.

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate

: Not available.

effects

Potential delayed effects

: Not available.

Potential chronic health effects

General

: Prolonged or repeated contact can defat the skin and lead to irritation, cracking and/or

dermatitis.

Carcinogenicity

: No known significant effects or critical hazards.

Mutagenicity

: No known significant effects or critical hazards.

Teratogenicity

Developmental effects

No known significant effects or critical hazards.No known significant effects or critical hazards.

Fertility effects

: No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Not available.

Additional information

This product contains trace quantities of acrylamide monomer. Acrylamide has been identified as a suspected cancer agent by the National Toxicology Program (NTP) and/or by the International Agency for Research on Cancer (IARC).

Section 12. Ecological information

Toxicity

| Product/ingredient name | Result | Species | Exposure |
|-------------------------|--|---|--------------------|
| Petroleum distillates | Acute LC50 2200 μg/l Fresh water Acute LC50 2900 μg/l Fresh water | Fish - Lepomis macrochirus Fish - Oncorhynchus mykiss | 4 days 96 hours |

Persistence and degradability

Not available.

Section 12. Ecological information

Other adverse effects

: No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods

: The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

| | DOT Classification | TDG Classification | IMDG | IATA |
|-------------------------------|--------------------|--------------------|----------------|----------------|
| UN number | Not regulated. | Not regulated. | Not regulated. | Not regulated. |
| UN proper shipping name | - | - | - | - |
| Transport hazard class(es) | - | - | - | - |
| Packing group | - | - | - | - |
| Environmental hazards | No. | No. | No. | No. |
| Additional information | - | - | - | - |

Special precautions for user : Transport within user's premises: always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Transport in bulk according: Not available.

to Annex II of MARPOL 73/78 and the IBC Code

DOT Reportable

Not applicable.

Quantity

Marine pollutant

Not available.

North-America NAERG

: Not available.

Section 15. Regulatory information

U.S. Federal regulations

: TSCA 12(b) one-time export: No products were found.

TSCA 12(b) annual export notification: No products were found.

United States inventory (TSCA 8b): All components are listed or exempted.

Clean Water Act (CWA) 307: No products were found.

Clean Water Act (CWA) 311: Adipic acid

Clean Air Act Section 112

(b) Hazardous Air

Pollutants (HAPs)

SARA 302/304

: No products were found.

: Not listed

SARA 311/312

Classification

: Immediate (acute) health hazard

SARA 313

Supplier notification

: No products were found.

Canada

Canada (CEPA DSL):

: All components are listed or exempted.

Section 16. Other information

National Fire Protection Association (U.S.A.)



History

Date of printing

: 2/19/2016.

 $oldsymbol{\mathbb{Z}}$ Indicates information that has changed from previously issued version.

Notice to reader

NOTE: The information on this SDS is based on data which is considered to be accurate. Baker Hughes, however, makes no guarantees or warranty, either expressed or implied of the accuracy or completeness of this information.

The conditions or methods of handling, storage, use and disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of this product.

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