

## Section 1. Identification

**Product name** : #05, #10, & #20 STANDARD POWER CHARGE  
**Product code** : 7851BA

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

**Identified uses** : Not available.

**Print date** : 10/18/2019

**Validation date** : 10/18/2019

**Version** : 4

**Supplier's details** : Baker Hughes  
 35372 Betka Rd.  
 Hempstead, TX 77445

**Emergency telephone number (with hours of operation)** : Manufacturer: (800) 892-9965  
 CHEMTREC: (800) 424-9300

## Section 2. Hazards identification

**OSHA/HCS status** : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

**Classification of the substance or mixture** : EXPLOSIVES - Division 1.4  
 SKIN IRRITATION - Category 2  
 SERIOUS EYE DAMAGE - Category 1  
 TOXIC TO REPRODUCTION (Unborn child) - Category 2  
 SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) (nervous system) - Category 2

### GHS label elements

#### **Hazard pictograms**



**Signal word** : Danger

**Hazard statements** : Fire or projection hazard.  
 Causes serious eye damage.  
 Causes skin irritation.  
 Suspected of damaging the unborn child.  
 May cause damage to organs through prolonged or repeated exposure. (nervous system)

### Precautionary statements

#### **Prevention**

: Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves. Wear eye or face protection. Wear protective clothing. Do not subject to grinding, shock, friction or any rough handling. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Do not breathe dust. Wash hands thoroughly after handling.

## Section 2. Hazards identification

- Response** : Get medical attention if you feel unwell. Explosion risk in case of fire. In case of fire: Evacuate area. DO NOT fight fire when fire reaches explosives. IF exposed or concerned: Get medical attention. IF ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing and wash it before reuse. If skin irritation occurs: Get medical attention. 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 or physician.
- Storage** : Store in accordance with all local, regional, national and international regulations. Store locked up.
- 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.

## Section 3. Composition/information on ingredients

**Substance/mixture** : Mixture

Ingredient name	%	CAS number
Strontium nitrate	50 - 60	10042-76-9
Potassium perchlorate	10 - 20	7778-74-7
toluene	10 - 20	108-88-3
Diatomaceous earth	1 - 5	61790-53-2

## Section 4. First aid measures

### Description of necessary first aid measures

- Eye contact** : Get medical attention immediately. Call a poison center or physician. Immediately flush the eye(s) continuously with lukewarm, gently flowing water for at least 20-60 minutes while holding the eyelid(s) open. Check for and remove any contact lenses. Chemical burns must be treated promptly by a physician.
- Inhalation** : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. 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** : Get medical attention immediately. Call a poison center or physician. Wash affected area with soap and mild detergent for at least 20 - 60 minutes. Wash skin thoroughly with soap and water or use recognized skin cleanser. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Chemical burns must be treated promptly by a physician. Wash clothing before reuse. Clean shoes thoroughly before reuse.
- Ingestion** : Wash out mouth with water. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. 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. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway.

### Most important symptoms/effects, acute and delayed

### Potential acute health effects

## Section 4. First aid measures

- Eye contact** : Causes serious eye damage.
- Inhalation** : No known significant effects or critical hazards.
- Skin contact** : Causes skin irritation. Defatting to the skin.
- Ingestion** : No known significant effects or critical hazards.

### Over-exposure signs/symptoms

- Eye contact** : pain, watering, redness
- Inhalation** : reduced fetal weight, increase in fetal deaths, skeletal malformations
- Skin contact** : pain or irritation, redness, dryness, cracking, blistering may occur, reduced fetal weight, increase in fetal deaths, skeletal malformations
- Ingestion** : stomach pains, reduced fetal weight, increase in fetal deaths, skeletal malformations

### 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. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

See toxicological information (Section 11)

## 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** : Explosive material with fire or projection hazard. Runoff to sewer may create fire or explosion hazard.

**Hazardous thermal decomposition products** : carbon dioxide, carbon monoxide, nitrogen oxides, halogenated compounds, metal oxide/oxides

**Special protective actions for fire-fighters** : First move people out of line-of-sight of the scene and away from windows. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool. Fight fire from protected location or maximum possible distance. Do not fight fire when it reaches the material. Withdraw from fire and let it burn.

**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. Fire-fighters' protective clothing will only provide limited protection.

## Section 6. Accidental release measures

### Personal precautions, protective equipment and emergency procedures

- For non-emergency personnel** : Accidental releases pose a serious fire or explosion hazard. Immediately contact 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. Shut off all ignition sources. No flares, smoking or flames in hazard area. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
- For emergency responders** : If specialized 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 non-emergency personnel".

- 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** : Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Avoid dust generation. Do not dry sweep. Vacuum dust with equipment fitted with a HEPA filter and place in a closed, labeled waste container. Place spilled material in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor.
- Large spill** : Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Avoid dust generation. Do not dry sweep. Vacuum dust with equipment fitted with a HEPA filter and place in a closed, labeled waste container. Dispose of via a licensed waste disposal contractor. 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.

## Section 7. Handling and storage

### Precautions for safe handling

- Protective measures** : Put on appropriate personal protective equipment (see Section 8). Avoid exposure - obtain special instructions before use. Avoid exposure during pregnancy. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not ingest. Avoid shock and friction. Use only with adequate ventilation. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. 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.

- Conditions for safe storage, including any incompatibilities** : Store in accordance with local regulations. Store in a segregated and approved area. 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. Eliminate all ignition sources. 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. See Section 10 for incompatible materials before handling or use.

## Section 8. Exposure controls/personal protection

### Control parameters

#### Occupational exposure limits

Ingredient name	Exposure limits
Strontium nitrate Potassium perchlorate toluene	None. None. <b>OSHA PEL 1989 (United States, 3/1989).</b> TWA: 100 ppm 8 hours. TWA: 375 mg/m <sup>3</sup> 8 hours. STEL: 150 ppm 15 minutes. STEL: 560 mg/m <sup>3</sup> 15 minutes. <b>OSHA PEL Z2 (United States, 2/2013).</b> TWA: 200 ppm 8 hours. CEIL: 300 ppm AMP: 500 ppm 10 minutes. <b>NIOSH REL (United States, 10/2016).</b> TWA: 100 ppm 10 hours. TWA: 375 mg/m <sup>3</sup> 10 hours. STEL: 150 ppm 15 minutes. STEL: 560 mg/m <sup>3</sup> 15 minutes. <b>ACGIH TLV (United States, 3/2018).</b> TWA: 20 ppm 8 hours.
Diatomaceous earth	<b>OSHA PEL 1989 (United States, 3/1989).</b> TWA: 6 mg/m <sup>3</sup> 8 hours. <b>OSHA PEL Z3 (United States, 6/2016).</b> TWA: 20 mppcf 8 hours. TWA: 80 mg/m <sup>3</sup> / (%SiO <sub>2</sub> ) 8 hours. <b>NIOSH REL (United States, 10/2016).</b> TWA: 6 mg/m <sup>3</sup> 10 hours.

Consult local authorities for acceptable exposure limits.

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** : Engineering controls may be required to control the primary or secondary risks associated with this product. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. Use explosion-proof ventilation equipment.

### 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** : Wear chemical safety goggles. When transferring material wear face-shield in addition to chemical safety goggles. If inhalation hazards exist, a full-face respirator may be required instead.

**Hand protection** : Chemical-resistant gloves.

**Skin protection** : Wear long sleeves and chemical resistant apron to prevent repeated or prolonged skin contact.

**Respiratory protection** : Use a properly fitted, particulate filter respirator complying with an approved standard if a risk assessment indicates this is necessary. 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 [Tar-like ]
Color	: Black.
Odor	: Solvent. [Slight]
Odor threshold	: Not available.
pH	: Not available.
Melting/freezing point	: Not available.
Boiling point	: Not available.
Initial Boiling Point	: Not available.
Flash point	: Not available.
Burning time	: Not available.
Burning rate	: Not available.
Evaporation rate	: Not available.
Flammability (solid, gas)	: Not available.
Lower and upper explosive (flammable) limits	: Not available.
Vapor pressure	: Not available.
Vapor density	: Not available.
Relative density	: Not available.
Density	: Not available.
Solubility in water	: Insoluble
Partition coefficient: n-octanol/water	: Not available.
Auto-ignition temperature	: Not available.
Decomposition temperature	: Not available.
Viscosity	: Not available.
VOC	: Not available.
Pour Point	: Not available.

## Section 10. Stability and reactivity

Reactivity	: This product presents only a small hazard in the event of ignition or initiation, the effects largely being confined to the package with no expected projection of fragments of appreciable size or range.
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	: Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition. Avoid shock and friction.
Incompatible materials	: Not available.
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
Strontium nitrate	LD50 Oral	Rat	1892 mg/kg	-
toluene	LC50 Inhalation Vapor	Rat	49 g/m <sup>3</sup>	4 hours
	LD50 Oral	Rat	636 mg/kg	-

#### Irritation/Corrosion

No applicable toxicity data

#### Sensitization

No applicable toxicity data

#### Mutagenicity

No applicable toxicity data

#### Carcinogenicity

Product/ingredient name	OSHA	IARC	NTP
Strontium nitrate	-	2A	-
toluene	-	3	-
Diatomaceous earth	-	3	-

#### Reproductive toxicity

No applicable toxicity data

#### Teratogenicity

No applicable toxicity data

#### Specific target organ toxicity (single exposure)

Name	Category	Route of exposure	Target organs
toluene	Category 3	Not applicable.	Narcotic effects

#### Specific target organ toxicity (repeated exposure)

Name	Category	Route of exposure	Target organs
toluene	Category 2	Not determined	nervous system

#### Aspiration hazard

Name	Result
toluene	ASPIRATION HAZARD - Category 1

**Information on the likely routes of exposure** : Not available.

#### Potential acute health effects

- Eye contact** : Causes serious eye damage.
- Inhalation** : No known significant effects or critical hazards.
- Skin contact** : Causes skin irritation. Defatting to the skin.
- Ingestion** : No known significant effects or critical hazards.

#### Potential chronic health effects



## Section 11. Toxicological information

<b>General</b>	: May cause damage to organs through prolonged or repeated exposure. Prolonged or repeated contact can defat the skin and lead to irritation, cracking and/or dermatitis.
<b>Carcinogenicity</b>	: No known significant effects or critical hazards.
<b>Mutagenicity</b>	: No known significant effects or critical hazards.
<b>Teratogenicity</b>	: Suspected of damaging the unborn child.
<b>Developmental effects</b>	: No known significant effects or critical hazards.
<b>Fertility effects</b>	: No known significant effects or critical hazards.

### Numerical measures of toxicity

#### Acute toxicity estimates

Route	ATE value
Oral	3030.6 mg/kg

## Section 12. Ecological information

### Toxicity

Product/ingredient name	Result	Species	Exposure
toluene	Acute EC50 433 ppm Marine water	Algae - Skeletonema costatum	96 hours
	Acute EC50 12500 µg/l Fresh water	Algae - Pseudokirchneriella subcapitata	72 hours
	Acute EC50 11600 µg/l Fresh water	Crustaceans - Gammarus pseudolimnaeus - Adult	48 hours
	Acute EC50 6000 µg/l Fresh water	Daphnia - Daphnia magna - Juvenile (Fledgling, Hatchling, Weanling)	48 hours
	Acute LC50 5500 µg/l Fresh water	Fish - Oncorhynchus kisutch - Fry	96 hours
	Chronic NOEC 500000 µg/l Fresh water	Algae - Pseudokirchneriella subcapitata	96 hours
	Chronic NOEC 1000 µg/l Fresh water	Daphnia - Daphnia magna	21 days

### Persistence and degradability

Not available.





<b>Other adverse effects</b>	: No known significant effects or critical hazards.
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## Section 13. Disposal considerations

<b>Disposal methods</b>	: Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. 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. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.
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## Section 14. Transport information

	DOT Classification	TDG Classification	IMDG	IATA
UN number	UN0349	UN0349	UN0349	UN0349
UN proper shipping name	Articles, explosive, n.o.s. (Contains: Potassium perchlorate, Strontium nitrate)	Articles, explosive, n.o.s. (Contains: Potassium perchlorate, Strontium nitrate)	Articles, explosive, n.o.s. (Contains: Potassium perchlorate, Strontium nitrate)	Articles, explosive, n.o.s. (Contains: Potassium perchlorate, Strontium nitrate)
Transport hazard class(es)	1.4S 	1.4S 	1.4S 	1.4S 
Packing group	-	-	-	-
Environmental hazards	No.	No.	No.	No.

### Additional information

**DOT Classification** : **Reportable quantity** 6896.6 lbs / 3131 kg. Package sizes shipped in quantities less than the product reportable quantity are not subject to the RQ (reportable quantity) transportation requirements.

**TDG Classification** : Product classified as per the following sections of the Transportation of Dangerous Goods Regulations: 2.9-2.12 (Class 1).

**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 to Annex II of MARPOL and the IBC Code** : Not available.

**DOT Reportable Quantity** toluene, 6897 lbs of this product.

**Marine pollutant** Not available.

**North-America NAERG** : 114

## 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:** toluene  
**Clean Water Act (CWA) 311:** toluene

### United States - Clean Air Act Section 112(b) Hazardous Air Pollutants (HAPs) :

List name	Status	Ingredient name	Name on list	Conc.
United States - Clean Air Act Section 112(b) Hazardous Air Pollutants (HAPs)	Listed	toluene	Toluene	10 - 20

**SARA 302/304** : No products were found.

## Section 15. Regulatory information

### SARA 311/312

**Classification** : Sudden release of pressure  
 Immediate (acute) health hazard  
 Delayed (chronic) health hazard

### SARA 313

	Product name	CAS number	%
Supplier notification	Strontium nitrate	10042-76-9	50 - 60
	toluene	108-88-3	10 - 20

### California Prop. 65

**⚠ WARNING:** This product can expose you to chemicals including Silica, crystalline, which is known to the State of California to cause cancer, and toluene, which is known to the State of California to cause birth defects or other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

### Canada

**Canada (CEPA DSL):** : At least one component is not listed in DSL but all such components are listed in NDSL.

### International regulations

#### National inventory

**Australia** : All components are listed or exempted.  
**China** : All components are listed or exempted.  
**Europe** : All components are listed or exempted.  
**Japan** : **Japan inventory (ENCS):** Not determined.  
**Japan inventory (ISHL):** Not determined.  
**Malaysia** : Not determined.  
**New Zealand** : All components are listed or exempted.  
**Philippines** : All components are listed or exempted.  
**Republic of Korea** : All components are listed or exempted.  
**Taiwan** : All components are listed or exempted.

## Section 16. Other information

### Hazardous Material Information System (U.S.A.)

Health	*	2
Flammability		1
Physical hazards		0
Personal protection		D

The customer is responsible for determining the PPE code for this material. For more information on HMIS® Personal Protective Equipment (PPE) codes, consult the HMIS® Implementation Manual.

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



### History

**Date of printing** : 10/18/2019

### Notice to reader

## Section 16. Other information

**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.

This SDS was prepared and is to be used for this product. If the product is used as a component in another product, this SDS information may not be applicable.