| R | PCIS ® | | ustin Avenue, Mo 000 800-323-814 | | 0053-0519, U | S.A. | |
|-------------|--|--|--|---|---|--|--|
| U Teo | CHNOLOGIES, INC. | | Friday: 7:30 a.m | | Г) | INFOTR | Emergency Contact: AC 800-535-5053 [U.S.A.] |
| | 1-Heptanesulfonat 403027, 403057, 4 | | | | | | |
| | | | MATERIAL | SAFETY DATA | SHEET | | |
| SECTIO | N 1 | | PRODUC | | | | |
| | <i>Name</i> : 1-Heptane <i>Code</i> : 403027, 4 | | | 327 | | | |
| SECTIO | N 2 | CO | MPOSITION, INF | ORMATION ON | INGREDIEN | тѕ | |
| | ns Heptane sulfonic a 22767-50-6 | cid, sodium | salt | MF: | C7H15NaO3S | 6 or | CH₃(CH₂)₀SO₃●Na |
| | <i>nt</i> s 1-Heptanesulfonat Manufacturing imp | | | | | | |
| SECTIO | N 3 | | HAZARD | | TION | | |
| | | ial. | <i>have not been ful</i> Emer -4); Health = 1; F | gency Overview | Use due caut v | ion in han | |
| | May be irrit harmfr The proper handli May emit to produc Standard c with ey Target orga | ul if ingested ties of this n ng and use poic fumes u cts: carbon r hemical han yes, skin, an ans: Undete | , eyes, mucous m haterial have not k of this material. Inder fire condition nonoxide, carbon dling precautions: d clothing. Wash rmined 9, and 10. | been fully investings-potential che dioxide, sulfur c Avoid ingestion thoroughly afte | gated. Use du mical or therm xides or breathing o r handling. | ue caution al decom dust. Avc | n in position id contact |
| | azard Information This compound h Primary Route(s) o Eye: Ma Skin: Ma Inhalation: Ma Ingestion: Ma Acute: No Chronic: Ma Symptoms: See al See Section 11 for | as not fully of Entry: Ing ay be irritatin ay be irritatin ay be irritatin ay be harmfr o exposure I ay cause irri pove route. | estion, Eye or Sking. ng. Prolonged exping to mucous mer ul. May cause ga imit has been esta tation. May be ha Pre-existing conc oxicological data. | toxicological, i in contact, Dust oosure may caus mbranes and up strointestinal irri ablished and lim armful. litions which ma | rritation, or s inhalation e dermatitis. per respiratory tation, nausea ited toxicologie y be aggravate | imilar ter v system. , and von cal inform ed: not de | ndencies. May be harmful. hiting. ation is available. |
| SECTIO | N 4 | | FIRST | AID MEASURE | :5 | | |
| Abbreviatio | | e; NE—not est fective Date: | ablished; U—unknowi 08/14/2008 | n/not available; NL— Version | | ; Y—yes.; N Page | IDA-No data available. 1 of 6 |



Name: 1-Heptanesulfonate, sodium salt

Code: 403027, 403057, 403127, 403227, 403327

| MATERIAL SAFETY DATA SHEET | | | | | | | | | |
|--|---|--|--|--|--|--|--|--|--|
| Eye contact: Skin contact: Inhalation: Ingestion: <i>Wash contaminat</i> Physician note: | Immediately flush eyes minutes; lift eyelids occa Immediately remove con amounts of water. If irri Remove to fresh air. If rest. If breathing is diffic Wash out mouth with wa ted clothing before reuse. Symptomatic and suppor judgment in response to | asionally. If irrita ntaminated cloth tation persists, c not breathing, gi cult, give oxyger ater provided pe portive care. No s | ation persists, consult ing and shoes, then we consult physician. ve artificial respiration i; consult physician. rson is conscious; conspecific antidote. Trea | physician wash skin n and keep nsult phys | n. with soap and copious p person warm and at sician. | | | | |
| SECTION 5 | FIR | E FIGHTING M | EASURES | | | | | | |
| Flash Point: NA OSHA Flammability Class NFPA: See Section 3 Ha | | | Autoignition: Explosion Limits: w above. | NE upper: lower: | NE NE | | | | |
| Special or Standard Fire I Standard precaut and prote Standard Fire and Explos Slight fire hazard an ignitio Explosion potenti concentra Avoid inhalation o Unusual Fire and Explosio None Hazardous Combustion o | ions for fighting large fire ective clothing to prevent <i>ion Hazards</i> As with most organic con a source. al unknownIf a substand ations in the presence of of material or combustion on Hazards or Decomposition Product | s involving cherr contact with skir mpounds, fire is ce is an organic an ignition sourc by-products. | nicals: Wear self-con and eyes. possible at elevated solid, fine dust disper | temperatu rsed in air | in sufficient | | | | |
| SECTION 6 | ACCIDE | NTAL RELEAS | E MEASURES | | | | | | |
| Occupational Release Eliminate all igniti Evacuate unnece Wear protective of Wear NIOSH/MS If in solution, mix Sweep up, seal in Avoid raising dus Wash spill site aff | Standard chemical precautions: Keep out of water supplies and sewers. | | | | | | | | |
| SECTION 7 | НА | NDLING AND S | TORAGE | | | | | | |

Abbreviations: NA-not applicable; NE-not established; U-unknown/not available; NL-not listed; N-no; Y-yes.; NDA-No data available.



.....

Ceilina Limit Ceilina (skin)

Use: Ion Pairing Reagent

Name: 1-Heptanesulfonate, sodium salt *Code*: 403027, 403057, 403127, 403227, 403327

General Handling Measures See Section 8 Below. General Storage Measures Store in a cool, dry place with adequate ventilation. Minimize dust. Avoid ignition and heat sources. Special Storage Instructions None Special Handling Instructions

None

SECTION 8 EXPOSURE CONTROLS, PERSONAL PROTECTION

| Airborne | Exposure | l imits |
|---------------|----------|---------|
| / 11/ 00///00 | LAPOOULO | |

| | | | | 0 | | υ () | | | |
|------------------------------------|---------------|-----|-------------------|-----|-------------------|-------|-------------------|-----|-------------------|
| | | ppm | mg/m ³ | ppm | mg/m ³ | ppm | mg/m ³ | ppm | mg/m ³ |
| 1-Heptanesulfonate, sodium salt | OSHA PEL/VPEL | NE | NE | NE | NE | NE | NE | NE | NE |
| 22767-50-6 | ACGIH - TLV | NE | NE | NE | NE | NE | NE | NE | NE |
| NE - Not optablighed: | | | | | | | | | |

TWA (8H)

STEL

NE = *Not* established;

Special/Other Control Measures Odor threshold: NA

Personal Protective Equipment (PPE)

Chemical safety eyewear

Compatible chemical-resistant gloves

NIOSH/MSHA approved respirator with appropriate protections to prevent dust inhalation.

Protective Clothing (e.g., lab coat)

Other Standard Safety Equipment and Engineering Preventive Measures

Safety shower and eye wash

Mechanical exhaust

General Precautions and Handling Measures

Avoid ingestion, inhalation and contact with eyes, skin, and clothing.

Avoid prolonged or repeated exposure. Wash thoroughly after handling.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Chemical Family: Alkyl sodium sulfonates

Appearance, Odor, and Other Properties

| pour | anoo, oaon, ana | | | |
|------|-------------------|--------------------------|-----------------------------------|----------|
| | Appearance: | White crystalline powder | Odor: | none |
| | MP: | >300°C (>572°F) | FW: | 202.25 |
| | bp: | NA | Solubility in Water: | Moderate |
| | pH: | NE | VP (mmHg): | NA |
| | Vapor Density: | NA | Water Reactive: | no |
| | % Volatiles: | NE | Specific Gravity $(H_20 = 1.0)$: | NE |
| | Evap. Rate: | NA | Refractive Index: | NA |
| | Viscosity: | NA | Octanol/Water (K _{OW}): | NE |
| | Solubility in Org | anic Solvents: NE | | |
| | | | | |

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Emergency Contact: INFOTRAC 800-535-5053 [U.S.A.]

Name: 1-Heptanesulfonate, sodium salt Code: 403027, 403057, 403127, 403227, 403327

| | MATERIAL SAFETY DATA SHEET | | | | | | |
|---------------------------------|---|--|--------------------|---|--|--|--|
| SECTIO | N 10 | STAI | BILITY AND REA | ACTIVITY | | | |
| Incompa Precautie Hazardo | Strong Oxidizers Strong Acids ons Avoid incompati Avoid generating Keep out of wate us Combustion | bilities. g dust. er supplies and sewers. o <i>r Decomposition Products</i> n monoxide, carbon dioxide | | | | | |
| SECTIO | N 11 | тохіс | OLOGICAL INFO | DRMATION | | | |
| To the b | est of our knowl | edge, the chemical, physica | al, and toxicologi | cal properties have not been thoroughly investigated. | | | |
| RTECS | # | | CAS # | | | | |
| | Not Assigned | 1-Heptanesulfonate, | 22767-50-6 | Only selected Registry of Toxic Effects of Chemical | | | |

sodium salt

Substances data (RTECS) is presented here. See actual entry in RTECS for complete information.

| Irritatior | n Data | eye | skin |
|------------|---------------------------------|-----|------|
| | 1-Heptanesulfonate, sodium salt | NDA | NDA |

| Toxicity | ' Data | oral | inhalation | dermal or other |
|----------|---------------------------------|------|------------|-----------------|
| | 1-Heptanesulfonate, sodium salt | NDA | NDA | NDA |

| Carcino | ogenicity | OSHA | IARC | NTP | ACGIH | NIOSH | Notes |
|---------|---------------------------------|------|------|-----|-------|-------|-------|
| | 1-Heptanesulfonate, sodium salt | NL | NL | NL | NL | NL | None |

NL = Not Listed as a carcinogen.

Teratogenicity

No data available.

Reproductive Effects

No data available.

Mutagenicity

No data available.

Miscellaneous

- 1. Lab studies of anionic surfactants in contact with rabbit eyes indicated that they may cause temporary eye damage which healed within one to two days.
- Dust of sulfonates may cause respiratory allergies. 2.

Acute and Chronic Effects and Symptoms

See specific route responses in Section 3 Hazards Identification above.



Emergency Contact: INFOTRAC 800-535-5053 [U.S.A.]

Name: 1-Heptanesulfonate, sodium salt Code: 403027, 403057, 403127, 403227, 403327 MATERIAL SAFETY DATA SHEET...... SECTION 12 ECOLOGICAL INFORMATION No known ecological hazards. Standard Chemical Precautions Keep out of water, air, and soil. SECTION 13 DISPOSAL CONSIDERATIONS That which cannot be recovered or recycled, should be disposed of in accordance with all applicable Federal, State, and local environmental regulations. RCRA waste code(s): None RCRA Hazard Class (40CFR 261): None SECTION 14 TRANSPORT INFORMATION Ship in accordance with all applicable local, St ate, Federal, and International transportation regulations. The following is a summary only. Check regulations for complete information: U.S. Department of Transportation (49CFR171.101) Hazard Class or Division: Not regulated. Land Transport ADR/RID: Not regulated. Air Transport IATA/ICAO: Not regulated. Maritime Transport IMDG: Not regulated. Reviews, Standards, and Regulations1-Heptanesulfonate, sodium salt CERCLA [Section 103 (40 CFR 302.4)]:NL RQ (lbs)NA RCRA Waste Code.....NA OSHA Process Safety [29 CFR 1910.119]:.....NL State Lists:.....NL States.....NL on CA CA No Significant Risk Level NL Clean Air Act [Section 112r (40 CFR 68)]:.....NL TQ (lbs).....NA Contains Ozone Depleters (Class I or Class II) NL Clean Air Act [Section 103 (40 CFR 302.4)]:.....NL SARA Title III Notification [40 CFR 302.4]: Section 302/304 (EHS) Ingredient [40 CFR 355.3].....NL TPQ (lbs.....NA RQ (lbs)NA Section 313 Ingredient [40 CFR 372.65] NL

Abbreviations: NA—not applicable; NE—not established; U—unknown/not available; NL—not listed; N—no; Y—yes.; NDA-No data available.



Name: 1-Heptanesulfonate, sodium salt *Code*: 403027, 403057, 403127, 403227, 403327

...... MATERIAL SAFETY DATA SHEET......

Hazard Classes

| Sara | Acute | Chronic | Fire | Pressure | Reactivity |
|-----------|--------|--------------|------------|-----------------|------------|
| Title III | Ν | N | Ν | Ν | Ν |
| | Health | Flammability | Reactivity | Special Hazards | |
| NFPA | 1 | 1 | 0 | None | |
| HMIS | 1 | 1 | 0 | N | one |

Risk Phrases:

Caution: The properties of this material have not been fully investigated.

Safety Phrases:

S3/7/9/14 Keep container tightly closed in a cool, well-ventilated place, away from strong oxidizers. S22/24/25 Do not breathe dust. Avoid contact with skin and eyes.

S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S36/37/39 Wear suitable protective clothing, gloves, and eye/face protection (i.e., lab coats, compatible chemicalresistant gloves, and chemical safety eyeware).

SECTION 16OTHER INFORMATION

Miscellaneous

The health and toxicological hazards of this compound have not been fully investigated; therefore, this substance must be handled only by, or under close supervision of those qualified in the handling and use of potentially hazardous substances.

This MSDS was revised as follows:

This MSDS was revised in all sections to a new format. Consider all sections to be new information to be reviewed.

Disclaimer

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Approved of by: MBF

This is the last page of this MSDS.

Reviewed and re-approved of with minor changes to the abbreviations in the footer and format.

by: MBF

08/14/2008