



SAFETY DATA SHEET

ANGUS CHEMICAL COMPANY

Product name : Sodium Acetate Trihydrate

Issue Date: 11/02/2017

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ANGUS CHEMICAL COMPANY encourages and expects you to read and understand the entire (M)SDS, as there is important information throughout the document. We expect you to follow the precautions identified in this document unless your use conditions would necessitate other appropriate methods or actions.

1. PRODUCT AND COMPANY IDENTIFICATION

Product name Sodium Acetate Trihydrate

Manufacturer or supplier's details

Company name of supplier ANGUS CHEMICAL COMPANY

Address 1500 E. LAKE COOK ROAD
Buffalo Grove IL 60089-6553

Customer Information Number +1-847-808-3711

E-mail address NAR_CC@ANGUS.COM

Emergency telephone number 800-424-9300

Recommended use of the chemical and restrictions on use

Recommended use Pharmaceuticals.
The ANGUS Chemical Company recommends that you use this product in a manner consistent with the listed use. If your intended use is not consistent with the stated use, please contact the Customer Information Group (see Section 1 of this data sheet).

2. HAZARDS IDENTIFICATION

GHS Classification

Not a hazardous substance or mixture.

GHS Label elements, including precautionary statements

This product is not hazardous per the Globally Harmonized System of Classification and Labelling (GHS).

Other hazards

None known.

3. COMPOSITION/INFORMATION ON INGREDIENTS

This product is a substance.

Components

| Chemical Name | CAS-No. | Concentration (% w/w) |
|----------------------------|-----------|-----------------------|
| Sodium Acetate, Trihydrate | 6131-90-4 | 100.0% |

4. FIRST AID MEASURES

| | |
|---|---|
| General advice | Do not leave the victim unattended. |
| If inhaled | If unconscious place in recovery position and seek medical advice. If symptoms persist, call a physician. |
| In case of skin contact | Wash with water and soap as a precaution. Call a physician if irritation persists. |
| In case of eye contact | Remove contact lenses. Rinse with water. Protect unharmed eye. If eye irritation persists, consult a specialist. |
| If swallowed | Clean mouth with water and drink afterwards plenty of water. Keep respiratory tract clear. Never give anything by mouth to an unconscious person. Call a poison control center or a doctor for further treatment advice. |
| Most important symptoms and effects, both acute and delayed | Aside from the information found under Description of first aid measures (above) and Indication of immediate medical attention and special treatment needed (below), any additional important symptoms and effects are described in Section 11: Toxicology Information. |
| Notes to physician | Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient. No specific antidote. |

5. FIREFIGHTING MEASURES

| | |
|-------------------------------|---|
| Suitable extinguishing media | Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide. ABC powder |
| Hazardous combustion products | During a fire, smoke may contain the original material in addition to combustion products of varying composition which may be toxic and/or irritating. Combustion products may include and are not limited to: |

| | |
|---|---|
| | Carbon dioxide. Carbon monoxide. |
| Further information | Keep people away. Isolate fire and deny unnecessary entry. Do not use direct water stream. May spread fire. Burning liquids may be moved by flushing with water to protect personnel and minimize property damage. Burning liquids may be extinguished by dilution with water. |
| Special protective equipment for firefighters | Wear positive-pressure self-contained breathing apparatus (SCBA) and protective fire fighting clothing (includes fire fighting helmet, coat, trousers, boots, and gloves). |

6. ACCIDENTAL RELEASE MEASURES

| | |
|---|--|
| Personal precautions, protective equipment and emergency procedures | Avoid dust formation. Wear compatible, chemically resistant gloves. |
| Methods and materials for containment and cleaning up | Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal. |

7. HANDLING AND STORAGE

| | |
|---|---|
| Advice on protection against fire and explosion | Avoid dusting. Under dusty conditions avoid all sources of ignition, including sparks and static electricity. Provide appropriate exhaust ventilation at places where dust is formed. |
| Advice on safe handling | For personal protection see section 8. Remove contaminated clothing. Smoking, eating and drinking should be prohibited in the application area. Wash thoroughly after handling. Avoid generating and breathing dust. |
| Conditions for safe storage | Electrical installations / working materials must comply with the technological safety standards. Keep containers tightly closed in a dry, cool and well-ventilated place. Ground all metal containers during storage and handling. |
| Materials to avoid | No materials to be especially mentioned. |

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Contains no substances with occupational exposure limit values.

Personal protective equipment

Respiratory protection General and local exhaust ventilation is recommended to

maintain vapor exposures below recommended limits. Where concentrations are above recommended limits or are unknown, appropriate respiratory protection should be worn. Follow OSHA respirator regulations (29 CFR 1910.134) and use NIOSH/MSHA approved respirators. Protection provided by air purifying respirators against exposure to any hazardous chemical is limited. Use a positive pressure air supplied respirator if there is any potential for uncontrolled release, exposure levels are unknown, or any other circumstance where air purifying respirators may not provide adequate protection.

Hand protection

Impervious gloves

Eye protection

Safety glasses (with side shields) should be sufficient for most operations; however, for dusty operations wear chemical goggles.

Skin and body protection

Protective suit

Hygiene measures

General industrial hygiene practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

| | |
|-------------------------------------|-------------------------|
| Appearance | Crystalline product |
| Color | Colorless |
| Odor | Odorless |
| Odor Threshold | no data available |
| pH | 7.5 - 9.5 % |
| Melting point/freezing point | 58 °C (136 °F) |
| Boiling point/boiling range | Not determined |
| Flash point | Not applicable |
| Flammability (solid, gas) | No data available. |
| Relative density | 1.5 |
| Density | 1,450 g/cm ³ |
| Solubility(ies) Water solubility | > 500 g/l |
| Solubility in other solvents | 52 g/l |

| | |
|---------------------------|--------------------|
| | Solvent: Alcohol |
| Auto-ignition temperature | > 600 °C |
| Explosive properties | No data available. |
| Oxidizing properties | No data available. |
| Molecular weight | 136.08 g/mol |

NOTE: The physical data presented above are typical values and should not be construed as a specification.

10. STABILITY AND REACTIVITY

| | |
|------------------------------------|---|
| Reactivity | Product decomposes above melting temperature. Thermal decomposition can lead to release of irritating gases and vapours. Reacts violently with: strong oxidizers strong acids |
| Chemical stability | No decomposition if stored and applied as directed. |
| Possibility of hazardous reactions | No dangerous reaction known under conditions of normal use. |
| Conditions to avoid | None required under normal operating conditions. |
| Incompatible materials | Oxidizing agents |
| Hazardous decomposition products | Decomposition products can include and are not limited to: Carbon dioxide. carbon monoxide Sodium oxides. |

11. TOXICOLOGICAL INFORMATION

Toxicological information on this product or its components appear in this section when such data is available.

Acute toxicity

Product:

Acute oral toxicity Remarks: not classified

Skin corrosion/irritation

Product:

Remarks: not classified

Serious eye damage/eye irritation

Product:

Remarks: not classified

Respiratory or skin sensitization

Product:

Remarks: For skin sensitization:
not classified

Remarks: For respiratory sensitization:
not classified

Carcinogenicity

IARC

No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

OSHA

No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

NTP

No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

Reproductive toxicity

Product:

Not Classified

STOT - single exposure

Product:

Remarks: not classified

STOT - repeated exposure

Product:

Remarks: not classified

Experience with human exposure

Product:

| | |
|--------------|---------------------------------------|
| Inhalation | Symptoms: slight irritation, coughing |
| Skin contact | Symptoms: slight irritation |
| Eye contact | Symptoms: slight irritation |

Ingestion

Symptoms: May cause nausea and vomiting., Abdominal pain

12. ECOLOGICAL INFORMATION

Ecotoxicity

Product:

Toxicity to fish

LC50: > 100 mg/l

Exposure time: 96 h

Remarks: Material is practically non-toxic to aquatic organisms on an acute basis (LC50/EC50/EL50/LL50 >100 mg/L in the most sensitive species tested).

Persistence and degradability

no data available

Bioaccumulative potential

no data available

Mobility in soil

no data available

Other adverse effects

no data available

13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues

DO NOT DUMP INTO ANY SEWERS, ON THE GROUND, OR INTO ANY BODY OF WATER.

All disposal practices must be in compliance with all Federal, State/Provincial and local laws and regulations.

Regulations may vary in different locations.

Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator.

THE INFORMATION PRESENTED HERE PERTAINS ONLY TO THE PRODUCT AS SHIPPED IN ITS INTENDED CONDITION AS DESCRIBED IN MSDS SECTION:

Composition Information.

FOR UNUSED & UNCONTAMINATED PRODUCT, the preferred options include sending to a licensed, permitted: Incinerator or other thermal destruction device.

Landfill.

ANGUS HAS NO CONTROL OVER THE MANAGEMENT PRACTICES OR MANUFACTURING PROCESSES OF PARTIES HANDLING OR USING THIS MATERIAL.

Contaminated packaging

Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. TRANSPORT INFORMATION

International Regulation

IATA-DGR

Not regulated as a dangerous good

IMDG-Code

Not regulated as a dangerous good

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

National Regulations

49 CFR (DOT) – NON BULK

Not regulated as a dangerous good

49 CFR (DOT) - BULK

Not regulated as a dangerous good

This information is not intended to convey all specific regulatory or operational requirements/information relating to this product. Transportation classifications may vary by container volume and may be influenced by regional or country variations in regulations. Additional transportation system information can be obtained through an authorized sales or customer service representative. It is the responsibility of the transporting organization to follow all applicable laws, regulations and rules relating to the transportation of the material.

15. REGULATORY INFORMATION

OSHA Hazards Combustible dust

EPCRA - Emergency Planning and Community Right-to-Know Act

CERCLA Reportable Quantity

This material does not contain any components with a CERCLA RQ.

SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

SARA 311/312 Hazards No SARA Hazards

SARA 302 No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

Clean Water Act

This product does not contain any Hazardous Substances listed under the U.S. CleanWater Act, Section 311, Table 116.4A.

This product does not contain any Hazardous Chemicals listed under the U.S. CleanWater Act, Section 311, Table 117.3.

This product does not contain any toxic pollutants listed under the U.S. Clean Water Act Section 307

US State Regulations

Massachusetts Right To Know

No components are subject to the Massachusetts Right to Know Act.

Pennsylvania Right To Know

The following chemicals are listed because of the additional requirements of Pennsylvania law:

| Cas No. | Component |
|----------------|----------------------------|
| 6131-90-4 | Sodium Acetate, Trihydrate |

New Jersey Right To Know

The following chemicals are listed because of the additional requirements of New Jersey law:

| Cas No. | Component |
|----------------|----------------------------|
| 6131-90-4 | Sodium Acetate, Trihydrate |

California Prop. 65

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

The components of this product are reported in the following inventories:

US. Toxic Substances Control Act

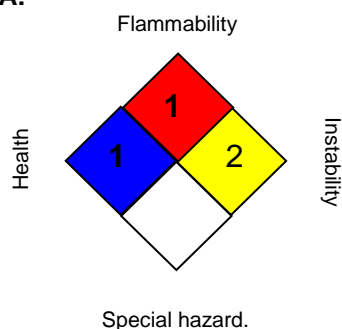
All components of this product are on the TSCA Inventory or are exempt from TSCA Inventory requirements under 40 CFR 720.30

The anhydrous form of this material is listed on the United States TSCA (Toxic Substance Control Act) inventory

16. OTHER INFORMATION

Further information

NFPA:



HMIS III:

| | |
|-----------------|---|
| HEALTH | 1 |
| FLAMMABILITY | 1 |
| PHYSICAL HAZARD | 2 |

0 = not significant, 1 =Slight,
 2 = Moderate, 3 = High
 4 = Extreme, * = Chronic

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US / EN

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

Full text of other abbreviations

(Q)SAR - (Quantitative) Structure Activity Relationship; ASTM - American Society for the Testing of Materials; bw - Body weight; DIN - Standard of the German Institute for Standardisation; ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ErCx - Concentration associated with x% growth rate response; GHS - Globally Harmonized System; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying

Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISO - International Organisation for Standardization; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; UN - United Nations; vPvB - Very Persistent and Very Bioaccumulative; DSL - Domestic Substances List (Canada); KECI - Korea Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); AICS - Australian Inventory of Chemical Substances; IECSC - Inventory of Existing Chemical Substances in China; ENCS - Existing and New Chemical Substances (Japan); ISHL - Industrial Safety and Health Law (Japan); PICCS - Philippines Inventory of Chemicals and Chemical Substances; NZIoC - New Zealand Inventory of Chemicals; TCSI - Taiwan Chemical Substance Inventory; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; DOT - Department of Transportation; EHS - Extremely Hazardous Substance; HMIS - Hazardous Materials Identification System; MSHA - Mine Safety and Health Administration; NFPA - National Fire Protection Association; RCRA - Resource Conservation and Recovery Act; RQ - Reportable Quantity; SARA - Superfund Amendments and Reauthorization Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; GLP - Good Laboratory Practice; ERG - Emergency Response Guide; NTP - National Toxicology Program; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods