SAFETY DATA SHEET

Issue Date 4/25/2016 **Revision Date** 4/25/2016 **Version** 1

1. IDENTIFICATION

Product identifier
Product Name: Dust Tech

Other means of identification
Product code: F-1102
Synonyms: None

Recommended use of the chemical and restrictions on use
Recommended Use: Processing aid for industrial applications.
Uses advised against: No information available

Details of the supplier of the safety data sheet
Supplier Address
FRONTIER PERFORMANCE LUBRICANTS INC
PO BOX 1777
LODI, CA 95241
Phone: (800)-807-4496
Fax: (209)-334-6408

Emergency telephone number
Emergency Telephone: PERS (800)-633-8253

2. HAZARDS IDENTIFICATION

Classification of the substance or mixture
Classification according to paragraph (d) of 29 CFR 1910.1200:
Eye Irritant 2A; H319

Label elements
Labelling according to paragraph (f) of 29 CFR 1910.1200:

Hazard symbol(s)

Signal word: Warning

Hazard statement(s): H319 - Causes serious eye irritation

Precautionary statement(s): P280 - Wear eye protection/ face protection P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing P337 + P313 - If eye irritation persists: Get medical advice/attention

Aqueous solutions or powders that become wet render surfaces extremely slippery.

For explanation of abbreviations see Section 16.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substances Not applicable, this product is not a substance.

Mixtures

Hazardous components

Sodium carbonate
Concentration/ -range: 20 - 40%
CAS Number: 497-19-8
Classification according to paragraph (d) of 29 CFR 1910.1200:
Eye Irrit. 2A;H319

Citric acid
Concentration/ -range: < 20%
CAS Number: 77-92-9
Classification according to paragraph (d) of 29 CFR 1910.1200:
Eye Irrit. 2A;H319

Adipic acid
Concentration/ -range: < 20%
CAS Number: 124-04-9
Classification according to paragraph (d) of 29 CFR 1910.1200:
Eye Irrit. 2A;H319

For explanation of abbreviations see section 16

4. FIRST AID MEASURES

Description of first aid measures
Inhalation: No hazards which require special first aid measures.
Skin contact: Wash off with soap and plenty of water. Get medical attention if irritation develops and persists.
Eye contact: Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. In case of persistent eye irritation, consult a physician.
Ingestion: Rinse mouth with water. Do NOT induce vomiting. No hazards which require special first aid measures.

Most important symptoms and effects, both acute and delayed
Irritating to eyes.

Indication of any immediate medical attention and special treatment needed.
None.

Other information: Aqueous solutions or powders that become wet render surfaces extremely slippery.

5. FIRE-FIGHTING MEASURES

Extinguishing media
Suitable extinguishing media: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
Unsuitable extinguishing media: None.

Special hazards arising from the substance or mixture
Hazardous decomposition products: Thermal decomposition may produce: nitrogen oxides (NOx), carbon oxides (COx). Hydrogen cyanide (hydrocyanic acid) may be produced in the event of combustion in an oxygen deficient atmosphere.

Advice for fire-fighters
Protective measures: In the event of fire, wear self-contained breathing apparatus.

Other information: Aqueous solutions or powders that become wet render surfaces extremely slippery.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures
Personal precautions: Aqueous solutions or powders that become wet render surfaces extremely slippery.
Protective equipment: Wear adequate personal protective equipment (see Section 8 Exposure Controls/Personal Protection).

Emergency procedures: Keep people away from spill/leak.

Environmental precautions As with all chemical products, do not flush into surface water.

Methods and material for containment and cleaning up

Small spills: Do not flush with water. Clean up promptly by sweeping or vacuum. Keep in suitable, closed containers for disposal. After cleaning, flush away traces with water.

Large spills: Do not flush with water. Clean up promptly by sweeping or vacuum. Keep in suitable, closed containers for disposal. After cleaning, flush away traces with water.

Residues: Flush away with large quantities of water.

Reference to other sections SECTION 7: Handling and storage; SECTION 8: Exposure controls/personal protection; SECTION 9: Physical and chemical properties; SECTION 13: Disposal considerations;

7. HANDLING AND STORAGE

Precautions for safe handling Avoid contact with eyes. Aqueous solutions or powders that become wet render surfaces extremely slippery.

Conditions for safe storage, including any incompatibilities.

Keep in a dry, cool and well-ventilated place. Keep container closed when not in use. Incompatible with strong acids and bases. Incompatible with oxidizing agents.

Specific end use(s) None.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Occupational exposure limits:

Adipic acid

ACGIH: 5 mg/m3 (8-hour)

Exposure controls

Appropriate engineering controls: Use local exhaust if dusting occurs. Natural ventilation is adequate in absence of dusts.

Individual protection measures, such as personal protective equipment:

Eye/face protection: Safety glasses with side-shields.
Skin protection: Workclothes protecting arms, legs and body.
Hand protection: PVC or other plastic material gloves.
Respiratory protection: No personal respiratory protective equipment normally required. Breathing apparatus only if aerosol or dust is formed.
Additional advice: Handle in accordance with good industrial hygiene and safety practice.

Environmental exposure controls: No special precautions required. Do not flush into surface water.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

a) Appearance:	Solid, White.
b) Odour:	None.
c) Odour Threshold:	Not applicable.
d) pH:	5-8 @ 5 g/L
e) Melting point/freezing point:	> 150°C
f) Initial boiling point and boiling range:	Not applicable.
g) Flash point:	Not applicable.
h) Evaporation rate:	Not applicable.
i) Flammability (solid, gas):	No data available.
j) Upper/lower flammability or explosive limits:	Not expected to create explosive atmospheres.
k) Vapour pressure:	Not applicable.
l) Vapour density:	Not applicable.
m) Relative density:	0.9 - 1.5
n) Solubility(ies):	Soluble in water.
o) Partition coefficient:	< 0
p) Autoignition temperature:	Does not self-ignite (based on the chemical structure).

q) Decomposition temperature:	>150°C
r) Viscosity:	See Technical Bulletin.
s) Explosive properties:	Not expected to be explosive based on the chemical structure.
t) Oxidizing properties:	Not expected to be oxidizing based on the chemical structure.

Other information None.

10. STABILITY AND REACTIVITY

Reactivity None known.

Chemical stability Stable under normal conditions.

Possibility of hazardous reactions Oxidizing agents may cause exothermic reactions.

Conditions to avoid None known.

Incompatible materials Incompatible with strong acids and bases. Incompatible with oxidizing agents.

Hazardous decomposition products

Thermal decomposition may produce: nitrogen oxides (NOx), carbon oxides (COx), hydrogen cyanide (hydrocyanic acid).

11. TOXICOLOGICAL INFORMATION

Information on toxicological effects

Information on the product as supplied:

Acute oral toxicity:	LD50/oral/rat > 2000 mg/kg. (Estimated)
Acute dermal toxicity:	LD50/dermal/rat > 2000 mg/kg (Estimated)
Acute inhalation toxicity:	The product is not expected to be toxic by inhalation.
Skin corrosion/irritation:	Not irritating.
Serious eye damage/eye irritation:	Irritating to eyes. Respiratory/skin sensitisation: Not sensitizing.
Mutagenicity:	By analogy with similar products, this product is not expected to to be mutagenic.
Carcinogenicity:	By analogy with similar substances, this substance is not expected to be carcinogenic.
Reproductive toxicity:	By analogy with similar substances, this substance is not expected to be toxic for reproduction.
STOT - single exposure:	No known effects.
STOT - repeated exposure:	No known effects.
Aspiration hazard:	No hazards resulting from the material as supplied.

Relevant information on the hazardous components:

Sodium carbonate

Acute oral toxicity:	LD50/oral/rat = 2800 mg/kg.
Acute dermal toxicity:	LD50/dermal/rabbit > 2000 mg/kg.
Acute inhalation toxicity:	LC50/inhalation/2 h/rat = 2300 mg/m3.
Skin corrosion/irritation:	Not irritating. (OECD 404)
Serious eye damage/eye irritation:	Irritating to eyes.
Respiratory/skin sensitisation:	The product is not expected to be sensitizing.
Mutagenicity:	By analogy with similar products, this product is not expected to to be mutagenic. (OECD 471)
Carcinogenicity:	Based on the absence of mutagenicity, it is unlikely that the substance is carcinogenic.
Reproductive toxicity:	Prenatal Development Toxicity Study (OECD 414) NOAEL/Maternal toxicity/rat >= 245 mg/kg/day NOAEL/Developmental toxicity/rat >= 245 mg/kg/day
STOT - single exposure:	No known effects.
STOT - repeated exposure:	No known effects.
Aspiration hazard:	No known effects.

Citric acid

Acute oral toxicity:	LD50/oral/rat = 5400 mg/kg. (OECD 401)
Acute dermal toxicity:	LD50/dermal/rat > 2000 mg/kg (OECD 402)
Acute inhalation toxicity:	The product is not expected to be toxic by inhalation.
Skin corrosion/irritation:	Non-irritating to skin. (OECD 404) May cause skin irritation with susceptible persons.
Serious eye damage/eye irritation:	Irritating to eyes.
Respiratory/skin sensitisation:	Not sensitizing. (OECD 406)
Mutagenicity:	Negative in the Ames Test (OECD 471). Negative in the Rodent Dominant Lethal Test (OECD 478). Not mutagenic. (OECD 475)

Carcinogenicity:	Did not show carcinogenic or mutagenic effects in animal experiments.
Reproductive toxicity:	Not toxic for reproduction.
STOT - single exposure:	No known effects.
STOT - repeated exposure:	No known effects.
Aspiration hazard:	No known effects.

Adipic acid

Acute oral toxicity:	LD50/oral/rat > 2000 mg/kg.
Acute dermal toxicity:	LD50/dermal/rabbit > 2000 mg/kg.
Acute inhalation toxicity:	LC0/inhalation/4 h/rat > 7.7 mg/L.
Skin corrosion/irritation:	Slightly irritating.
Serious eye damage/eye irritation:	Not irritating. (OECD 405) (SNF)
Respiratory/skin sensitisation:	Not sensitizing.
Mutagenicity:	Negative in the In vitro Mammalian Cell Gene Mutation Test (OECD 476).
Carcinogenicity:	Not carcinogenic. Reproductive toxicity: Not toxic for reproduction. STOT - single exposure: No known effects.
STOT - repeated exposure:	No known effects.
Aspiration hazard:	No known effects.

12. ECOLOGICAL INFORMATION

Toxicity

Information on the product as supplied

Acute toxicity to fish:	LC50/Danio rerio/96 hours > 100 mg/L (Estimated) LC50/Oncorhynchus mykiss/96 hours > 100 mg/L. (Estimated)
Acute toxicity to invertebrates:	EC50/Daphnia magna/48 hours > 100 mg/L. (Estimated)
Acute toxicity to algae:	IC50/Scenedesmus subspicatus/72 hours > 100 mg/L (Estimated)
Chronic toxicity to fish:	No data available.
Chronic toxicity to invertebrates:	No data available.
Toxicity to microorganisms:	No data available.
Effects on terrestrial organisms:	No data available.
Sediment toxicity:	No data available.

Relevant information on the hazardous components:

Sodium carbonate

Acute toxicity to fish:	LC50/Lepomis macrochirus/96 hours = 300 mg/L
Acute toxicity to invertebrates:	EC50/Ceriodaphnia/48 hours = 200 mg/L
Acute toxicity to algae:	No data available.
Chronic toxicity to fish:	No data available.
Chronic toxicity to invertebrates:	No data available.
Toxicity to microorganisms:	No data available.
Effects on terrestrial organisms:	No data available.
Sediment toxicity:	No data available.

Citric acid

Acute toxicity to fish:	LC50/Leuciscus idus/48 hours = 440 mg/L (OECD 203)
Acute toxicity to invertebrates:	EC50/Daphnia magna/24 hours = 1535 mg/L.
Acute toxicity to algae:	NOEC/Scenedesmus quadricauda/192 hours = 425 mg/L
Chronic toxicity to fish:	No data available.
Chronic toxicity to invertebrates:	No data available.
Toxicity to microorganisms:	NOEC/Pseudomonas putida/16 hours > 10000 mg/L
Effects on terrestrial organisms:	No data available.
Sediment toxicity:	No data available.

Adipic acid

Acute toxicity to fish:	LC0/Danio rerio/96 hours >= 1000 mg/L
Acute toxicity to invertebrates:	EC50/Daphnia magna/48 hours = 46 mg/L. (OECD 202)
Acute toxicity to algae:	IC50/Selenastrum capricornutum/72 hours = 59 mg/L (OECD 201)
Chronic toxicity to fish:	No data available.
Chronic toxicity to invertebrates:	NOEC/Daphnia magna/21 days = 6.3 mg/L. (OECD 211)
Toxicity to microorganisms:	EC50/activated sludge/3 hours = 4747 mg/L (OECD 209)
Effects on terrestrial organisms:	No data available.
Sediment toxicity:	No data available.

Persistence and degradability

Information on the product as supplied:
Degradation: Not readily biodegradable.
Hydrolysis: Does not hydrolyse.
Photolysis: No data available.

Relevant information on the hazardous components:

Sodium carbonate
Degradation: Not relevant (inorganic).
Hydrolysis: No data available.
Photolysis: No data available.

Citric acid
Degradation: Readily biodegradable. 97 % / 28 days (OECD 301 B)
Hydrolysis: No data available.
Photolysis: No data available.

Adipic acid
Degradation: Readily biodegradable. > 70% / 28 days (OECD 301 D)
Hydrolysis: Does not hydrolyse.
Photolysis: Half-life (indirect photolysis) = 2.9 days

Bioaccumulative potential

Information on the product as supplied:
The product is not expected to bioaccumulate.
Partition co-efficient (Log Pow): < 0
Bioconcentration factor (BCF): No data available.

Relevant information on the hazardous components:
Sodium carbonate
Partition co-efficient (Log Pow): No data available.
Bioconcentration factor (BCF): No data available.

Citric acid
Partition co-efficient (Log Pow): -1.72 @ 20°C
Bioconcentration factor (BCF): 3.2 L/kg

Adipic acid
Partition co-efficient (Log Pow): 0.093 @ 25°C, pH 3.3
Bioconcentration factor (BCF): No data available.

Mobility in soil

Information on the product as supplied:
No data available.

Relevant information on the hazardous components:

Sodium carbonate
Koc: No data available.
Citric acid
Koc: No data available.
Adipic acid
Koc: No data available.

Other adverse effects None known.

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Waste from residues/unused products:
Dispose in accordance with local and national regulations. Can be landfilled or incinerated, when in compliance with local regulations.
Contaminated packaging: Dispose in accordance with local and national regulations. Can be landfilled or incinerated, when in compliance with local regulations.

Recycling: The product and its packaging are not suitable for recycling.

14. TRANSPORT INFORMATION

Land transport (DOT) Not classified.
Sea transport (IMDG) Not classified.
Air transport (IATA) Not classified.

15. REGULATORY INFORMATION

Safety, health and environmental regulations/legislation specific for the substance or mixture

Information on the product as supplied:
TSCA Chemical Substances Inventory: All components of this product are either listed on the inventory or are exempt from listing.

US SARA Reporting Requirements:
SARA (Section 311/312) hazard class: Acute.
RCRA status : Not RCRA hazardous.

California Proposition 65 Information: WARNING! This product contains a chemical known to the State of California to cause cancer and birth defects or other reproductive harm, Acrylamide.

Relevant information on the hazardous components:
Adipic acid
Clean Water Act
CWA-Section 311 Hazardous Substances (40 CFR 117.3)
Reportable Quantity: 5000 lbs

CERCLA Hazardous Substances List (40 CFR 302.4)
Reportable Quantity: 5000 lbs

16. OTHER INFORMATION

NFPA and HMIS Ratings:

NFPA:

Health:	1
Flammability:	0
Instability:	0

HMIS:

Health:	1
Flammability:	0
Physical Hazard:	0
PPE Code:	B

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Disclaimer
The information provided in this Material 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.

End of Safety Data Sheet