



MATERIAL SAFETY DATA SHEET

1. COMPANY AND PRODUCT IDENTIFICATION

DUNCAN ENTERPRISES
5673 East Shields Avenue
Fresno, CA 93727
559-291-4444
559-291-9444 (Fax)

EMERGENCY TELEPHONE NUMBERS

Health Emergency: 559-291-4444 7:00 am – 3:30 pm
Pacific Standard Time
Spill and Off-Hour
Health Emergencies: 800-424-9300 U.S. and Canada
703-527-3887 Outside U.S. and
Canada (Collect)

Product Name: TULIP ONE-STEP FASHION DYES (First of 2 MSDS's)
Product Type: Reactive Dyes

2. COMPOSITION / INFORMATION ON INGREDIENTS

The ingredients in this formulation are a trade secret. All ingredients in the formula are non-hazardous, unless specified in Sections 3 and 15.

3. HAZARDS IDENTIFICATION

No Hazardous Ingredients

4. FIRST AID MEASURES

Eye Contact: Wash immediately with large amounts of water, occasionally lifting the upper and lower lids until no evidence of product remains. Get medical attention. Do not wear contact lenses while handling.

Skin Contact: Wash immediately with soap and plenty of water. If a temporary skin reaction occurs, it should be treated as allergic contact dermatitis. Launder contaminated clothing before reuse.

Ingestion: If swallowed, do not induce vomiting. Get medical attention. Qualified medical personnel should remove the product by gastric lavage and catharsis.

Inhalation: If inhaled, remove to fresh air. If not breathing, give artificial respiration, preferably mouth to mouth. If breathing is difficult, give oxygen. Call a physician.

5. FIRE FIGHTING MEASURES

Flash Point: N/A

Extinguishing Media: Water, dry chemical, CO₂, Foam

Special Firefighting Procedures: Firefighters should be equipped with protective clothing and self-contained breathing apparatus to protect against potentially toxic and irritating fumes. In case of fire or explosion, keep unnecessary people away. Isolate hazard area and any entry. Stay upwind, out of low areas, and ventilate closed spaces before entering.

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6. ACCIDENTAL RELEASE MEASURES

Spill or Leak Procedures: Do not touch or walk through the spilled material. Stop spillage if you can do so without risk. Take up with sand or other non-combustible absorbent materials and place into containers for later disposal. Scrub spilled area with detergent, flush with copious amounts of water.

For safety and environmental precautions, please review entire Material Safety Data Sheet for necessary information.

7. HANDLING AND STORAGE

Handling and Storage Precautions: Store in a dry place, away from excessive heat, in original or similar waterproof container. Reseal container immediately after use. Avoid unnecessary contact.

8. EXPOSURE CONTROL AND PERSONAL PROTECTION

Eye Protection: Protective eye goggles recommended

Skin Protection: This material may be absorbed via the dermal route if prolonged or widespread skin contact occurs. Skin contact should be avoided by wearing protective clothing. Long sleeve shirts, pants, rubber gloves, and boots are recommended. Additional protection such as impervious suits is recommended when the potential for dermal contact is significant. Wash hands and face before eating and drinking.

Respiratory Protection: Use a NIOSH approved dust respirator.

Ventilation: Use local ventilation if dusting is a problem.

Other: Emergency showers and eye wash stations should be available.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Various Colored Powders

Odor: Odorless

Solubility in Water: Soluble

pH: N/A

10. STABILITY AND REACTIVITY

Stability: Stable

Incompatibilities: None known

Hazardous Polymerization: Will not occur

Hazardous Decomposition Products: Oxides of carbon, nitrogen and sulfur; chlorine compounds

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11. TOXICOLOGICAL INFORMATION

Animal Toxicity Oral: No Data
Fish, LC50: No Data
Eye Effects: No Data
Skin Effects: No Data
Human Effects of Overexposure: Contact with eyes and skin may result in irritation. Ingestion may result in gastric disturbances. Inhalation may cause respiratory irritation.

12. ECOLOGICAL INFORMATION

No Applicable Data

13. DISPOSAL CONSIDERATIONS

Waste Disposal Methods: Waste disposal should be in accordance with existing Federal, State, and Local environmental regulations.
Empty Container Warnings: Empty containers may contain product residue; follow MSDS and label warnings even after they have been emptied.

14. TRANSPORT INFORMATION

U.S. Department of Transportation Information

DOT Shipping Name: Non-Hazardous
DOT Hazard Class: Non-Regulated
DOT Reportable Quantity: None
FRT Class Package: Dye Material

15. REGULATORY INFORMATION

TSCA: All components are on the TSCA Inventory
FDA: 21CFR175.105
SARA/Title III: This product contains no substances at or above the reported threshold under Section 313, based on available data.



Products bearing the Nontoxic Product Seal are certified in a program of toxicological evaluation by a nationally recognized toxicologist to contain no materials in sufficient quantities to be toxic or injurious to humans or to cause acute or chronic health problems. These products are certified to be labeled in accordance with the voluntary chronic hazard labeling standard ASTM D-4236. In addition, there is no physical hazard as defined within 29 CFR Part 1910.1200(c).

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16. OTHER INFORMATION

Table of Abbreviations

ACGIH	American Conference of Governmental Industrial Hygienists
ANSI	American National Standards Institute
ASTM	American Society for Testing Materials
°C	Degrees Centigrade
CAS	Chemical Abstract Service
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
CFR	Code of Federal Regulations
CPR	Controlled Products Regulations
DOT	Department of Transportation
EPA	Environmental Protection Agency
°F	Degrees Fahrenheit
FDA	Food & Drug Administration
Hg	Mercury
HMIS	Hazardous Materials Identification System
IARC	International Agency for Research on Cancer
LD	Lethal Dose
mg / kg	Milligram per kilogram
mm	Millimeter
MSDS	Material Safety Data Sheet
MSHA	Mine Safety and Health Administration
N / A	Not Applicable
NFPA	National Fire Protection Association
NIOSH	National Institute for Occupational Safety and Health
NTP	National Toxicology Program
OSHA	Occupational Safety and Health Administration
ppm	Parts per million
SARA	Superfund Amendment and Reauthorization Act
STEL	Short-Term Exposure Limit
TSCA	Toxic Substances Control Act
TWA	Time - Weighted Average
U.N.	United Nations
WHMIS	Workplace Hazardous Materials Information System
>	Greater Than
<	Less Than

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16. OTHER INFORMATION (Continued)

Creation Date: 3/24/06
Revision Date: 09/21/07
Technical Contact: Frank Peters
Senior R&D Chemist
Duncan Enterprises
5673 East Shields Avenue
Fresno, CA 93727
559-291-4444
559-291-9444 (Fax)

Disclaimer

The information given and the recommendations made herein apply to our product(s) alone and not combined with any other product(s). Such are based on our research and on data from other reliable sources and are believed to be accurate. No guarantee of accuracy is made. It is the purchaser's responsibility before using any product to verify this data under their own operating conditions and to determine whether the product is suitable for their purposes.

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Product Name: TULIP ONE-STEP FASHION DYE SODIUM BICARBONATE (2ND of 2
MSDS's)

Synonyms: Meylon; Soda; Monosodium carbonate; Sodium hydrogen carbonate; Sodium
acid carbonate; Bicarbonate of soda; Baking soda; Soda mint; NaHCO₃

2. COMPOSITION / INFORMATION ON INGREDIENTS

<u>Ingredient</u>	<u>CAS Number</u>	<u>Percent</u>	<u>Hazardous</u>
Sodium Bicarbonate	144-55-8	99 – 100	Yes

Not hazardous under OSHA Standard 29 CFR 1910.1200

Not a WHMIS controlled substance

3. HAZARDS IDENTIFICATION

HMIS Hazard Ratings

Health: 1 0 = Minimal
Flammability: 1 1 = Slight
Reactivity: 1 2 = Moderate
Personal Protection: See Section 8 3 = Serious
4 = Severe
* = Chronic Effects

NFPA Hazard Ratings

Health: 1
Flammability: 0
Reactivity: 0

Potential Health Effects

Eye: Contact may cause mild irritation, redness, and pain

Skin Contact: No adverse effects expected

Ingestion: Material is practically non-toxic. Small amounts (1-2 tablespoonfuls) swallowed during normal handling operations are not likely to cause injury as long as the stomach is not overly full; swallowing larger amounts may cause injury (see note in section 4).

Inhalation: High concentrations of dust may cause coughing and sneezing.

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Subchronic Effects / Carcinogenicity: Based on published studies on its effects in animals and humans, sodium bicarbonate is not teratogenic or genotoxic. Only known subchronic effect is that of a marked systemic alkalosis. Not classified as carcinogenic by NTP, IARC, OSHA, ACGIH or NIOSH.

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4. FIRST AID MEASURES

Eye Contact:	Check for and remove contact lenses. Flood eyes with clean flowing water, low Pressure and lukewarm (not hot) if possible, occasionally lifting eyelids
Skin Contact:	Wash affected area with soap and water. If irritation occurs and persists, obtain medical attention.
Inhalation:	Remove to fresh air; get medical attention for any breathing difficulty.
Ingestion:	If large amounts of this material are swallowed, do not induce vomiting. Administer water if person is conscious. Never give anything by mouth to an unconscious person.
Note to Physician:	Large doses may produce systemic alkalosis and expansion in extracellular fluid volume with edema.

5. FIRE FIGHTING MEASURES

Flammable Properties

Flash Point: Not combustible

Flammable Limits: LFL: Not applicable UFL: Not applicable

Extinguishing Media: Non-combustible material. Use extinguishing media appropriate for surrounding fire.

Fire-Fighting Instructions: Carbon dioxide may be generated making necessary the use of a self-contained breathing apparatus (SCBA) and full protective equipment (Bunker Gear). Carbon dioxide is an asphyxiant at levels over 5% w/w. Sodium oxide, another thermal decomposition product existing at temperatures above 1564° F is a respiratory, eye, and skin irritant. Avoid inhalation, eye and skin contact with sodium oxide dusts.

Unusual Fire and Explosion Hazards: None known

6. ACCIDENTAL RELEASE MEASURES

Procedure for Release or Spill: Ventilate area of leak or spill. Wear appropriate personal protective equipment as specified in Section 8: Spills. Sweep up and containerize for reclamation or disposal. Vacuuming or wet sweeping may be used to avoid dust dispersal. Small amounts of residue may be flushed to sewer with plenty of water.

7. HANDLING AND STORAGE

Handling: Observe all warnings and precautions listed for the product.
Storage: Keep in a tightly closed container, stored in a cool, dry, ventilated area. Protect against physical damage; containers of this material may be hazardous when empty since they can retain product residues (dust, solids).

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8. EXPOSURE CONTROL AND PERSONAL PROTECTION

Airborne Exposure Limits:	None established
Ventilation:	In general, dilution ventilation is a satisfactory health hazard control for this substance. However, if conditions of use create discomfort to the worker, a local exhaust system should be considered.
Personal Respirators:	For conditions of use where exposure to dust or mist is apparent and engineering controls are not feasible, a particulate respirator (NIOSH type N95 or better filters) may be worn. If oil particulates (e.g. lubricants, cutting fluids, glycerine, etc.) are present, use a NIOSH type R or P filter. For emergencies or instances where the exposure levels are not known, use a full-face positive-pressure, air-supplied respirator. Warning – Air purifying respirators do not protect workers in oxygen-deficient atmospheres.
Skin Protection:	Wear protective gloves and clean body-covering clothing.
Eye Protection:	Use chemical safety goggles, maintain eye wash fountain and quick-drench facilities in work area.

9. PHYSICAL AND CHEMICAL PROPERTIES

Molecular Weight:	84.01
Chemical Formula:	NaHCO ₃
Melting/Freezing Point:	60° C (140° F)
Boiling Point:	N/A
Vapor Pressure:	N/A
Vapor Density:	N/A
Appearance and State:	White crystalline powder
Odor:	Odorless
Specific Gravity (Water = 1):	2.159
Solubility in Water:	7.8 g / 100 cc water @ 18°C (64° F)
Percent Volatiles (21° C (70° F)):	0.0
Evaporation Rate:	N/A
pH (aqueous solution):	8.3 (0.1% molar @ 25°C (77°F))
Flash Point:	N/A
Autoignition Temperature:	N/A

10. STABILITY AND REACTIVITY

Stability:	Stable under ordinary conditions of use and storage.
Hazardous Decomposition Products:	Gaseous carbon dioxide
Incompatibilities:	Reacts with acids to form carbon dioxide. Dangerous reaction with monoammonium phosphate or a sodium-potassium alloy

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10. STABILITY AND REACTIVITY (Continued)

Hazardous Polymerization: Will not occur.

Conditions to Avoid: Heat, moisture, incompatible materials

11. TOXICOLOGICAL INFORMATION

Eye Effects: The material was minimally irritating to unwashed eyes and practically non-irritating to washed eyes (rabbits).

Skin Effects: Not a skin irritant or dermally toxic. Not a contact sensitizer.

Acute Oral Effects: Acute Oral-rat LD₅₀ = 7.3 g/kg.

Acute Inhalation: LC₅₀ (rat) > 4.74 mg/l.

Carcinogenicity: -----NTP Carcinogen-----

<u>Ingredient</u>	<u>CAS Number</u>	<u>Known</u>	<u>Anticipated</u>	<u>IARC Category</u>
Sodium Bicarbonate	144-55-8	No	No	None

12. ECOLOGICAL INFORMATION

Aquatic Toxicity

Daphnids: EC₅₀ = 4100 mg/l
Bluegill: LC₅₀ = 7100 mg/l
Rainbow Trout: LC₅₀ = 7700 mg/l

Persistence: This product is not expected to persist in the environment

Bioaccumulation: This product is not expected to bioaccumulate

13. DISPOSAL CONSIDERATIONS

Waste Disposal Methods: Whatever cannot be saved for recovery or recycling should be managed in an appropriate and approved waste disposal facility. Processing, use or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations. Dispose of container and unused contents in accordance with federal, state and local requirements.

14. TRANSPORT INFORMATION

DOT Shipping Name: Not regulated

Technical Shipping Name: Sodium Bicarbonate

DOT Hazard Class: None

UN / NA Number: None

Hazardous Substance / RQ: None

DOT Label: None

ICAO/IATA: Not Regulated

IMO: Not Regulated

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15. REGULATORY INFORMATION

Chemical Inventory Status – Part 1

Ingredient	TSCA	EC	Japan	Australia
Sodium Bicarbonate (144-55-8)	Yes	Yes	Yes	Yes

Chemical Inventory Status – Part 2

Ingredient	Korea	DSL	NDSL	Phil.	---Canada---
Sodium Bicarbonate (144-55-8)	Yes	Yes	No	Yes	

Federal, State and International Regulations – Part 1

Ingredient	-----SARA 302-----		-----SARA 313-----	
	RQ	TPQ	List	Chemical Catg.
Sodium Bicarbonate (144-55-8)	No	No	No	No

Federal, State and International Regulations – Part 2

Ingredient	CERCLA	RCRA 261.33	TSCA 8 (D)
Sodium Bicarbonate (144-55-8)	No	No	No

Chemical Weapons Convention: No TSCA 12(b): No CDTA: No
 SARA 311/312: Acute: No Chronic: No Fire: No Pressure: No
 Reactivity: No (Pure / Solid)
 Australian Hazchem Code: None allocated
 Poison Schedule: None allocated
 WHMIS: This MSDS has been prepared according to the hazard criteria of the controlled products regulations (CPR) and the MSDS contains all of the information required by the CPR.

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DOT	Department of Transportation
EPA	Environmental Protection Agency
°F	Degrees Fahrenheit
FDA	Food & Drug Administration
Hg	Mercury
HMIS	Hazardous Materials Identification System
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
ICAO	International Civil Aviation Organization

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16. OTHER INFORMATION (Continued)

Table of Abbreviations, Continued

IMO	International Maritime Organization
LD	Lethal Dose
LFL	Lower Flammability Limit
mg / kg	Milligram per kilogram
mm	Millimeter
MSDS	Material Safety Data Sheet
MSHA	Mine Safety and Health Administration
NA	North America
N / A	Not Applicable
NFPA	National Fire Protection Association
NIOSH	National Institute for Occupational Safety and Health
NTP	National Toxicology Program
OSHA	Occupational Safety and Health Administration
ppm	Parts per million
SARA	Superfund Amendment and Reauthorization Act
STEL	Short-Term Exposure Limit
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UFL	Upper Flammability Limit
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