

Safety Data Sheet

**Section 1: Identification of the Substance/Mixture and of the Company/Undertaking****1.1 Product identifier****Product Name** | #1096 Buflacon**Product Code** | #1096**Product Description** | Buflacon**1.2 Relevant identified uses of the substance or mixture and uses advised against****Relevant identified use(s)** | Flavor**1.3 Details of the supplier of the safety data sheet****Manufacturer** | DairyChem
9120 Technology Drive
Fishers, IN 46038
United States
www.dairychem.com**Telephone(General)** | 317-849-8400**1.4 Emergency telephone number****Manufacturer** | 800-424-9300 - CHEMTREC**Section 2: Hazards Identification****EU/EEC****According to:** Regulation (EC) No 1272/2008 (CLP)/REACH 1907/2006 [amended by 453/2010]**According to:** EU Directive 67/548/EEC (DSD) or 1999/45/EC (DPD)**2.1 Classification of the substance or mixture****CLP** | Notclassified**DSD/DPD** | Notclassified**2.2 Label Elements****CLP****Hazard statements** | No label element(s) required**DSD/DPD****Riskphrases** | No label element(s) required**2.3 Other Hazards****CLP** | According to Regulation (EC) No. 1272/2008 (CLP) this material is not considered hazardous.**DSD/DPD** | According to European Directive 1999/45/EC this preparation is considered not hazardous.**United States (US)****According to:** OSHA 29 CFR 1910.1200 HCS

2.1 Classification of the substance or mixture

OSHA HCS 2012 | No data available

2.2 Label elements

OSHA HCS 2012

Hazard statements | No label element(s) required

2.3 Other hazards

OSHA HCS 2012

| This product is not considered hazardous under the U.S. OSHA 29 CFR 1910.1200 Hazard Communication Standard.

Section 3 - Composition/Information on Ingredients

3.1 Substances

| Material does not meet the criteria of a substance.

3.2 Mixtures

Composition					
Chemical Name	Identifiers	%	LD50/LC50	Classifications According to Regulation/Directive	Comments
Natural flavor	Proprietary	< 1%	Ingestion/Oral-Rat LD50 • 3310 mg/kg Skin-Rabbit LD50 • 1060 mg/kg Inhalation-Rat LC50 • 11400 mg/m ³ 4 Hour(s)	EU DSD/DPD: Annex VI, Table 3.2: R10; C, R35 EU CLP: Annex VI, Table 3.1: Flam. Liq. 3, H226; Skin Corr. 1A, H314 OSHA HCS 2012: Flam. Liq.3; Acute Tox. 4 (skn); Eye Dam. 1; Skin Corr.1B	NDA
2,3-Butanedione	CAS:431-03-8 EINECS:207-069-8	< 1%	Ingestion/Oral-Rat LD50 • 1580 mg/kg Skin-Rabbit LD50 • >5 g/kg	EU DSD/DPD: F; R11; Xn; R20/22-T; R48/23; Xi; R36/37/38 EU CLP: Flam. Liq. 2, H225; Acute Tox. 4 (orl), H302; Acute Tox. 4 (inhl), H332; Eye Irrit. 2, H319; Skin Irrit. 2, H315; STOT RE 1 (Lungs), H372 OSHA HCS 2012: Flam. Liq. 2; Acute Tox. 4 (orl); Acute Tox. 4 (inhl); Eye Irrit. 2; Skin Irrit. 2; STOT RE 1 (Lungs)	NDA
Natural flavor	Proprietary	< 1%	Ingestion/Oral-Rat LD50 • 2600 mg/kg Skin-Rabbit LD50 • 500 µL/kg Inhalation-Rat LC50 • >4900 mg/m ³ 4 Hour(s)	EU DSD/DPD: Annex VI, Table 3.2: C, R34 EU CLP: Annex VI, Table 3.1: Skin Corr. 1B, H314 OSHA HCS 2012: Flam. Liq. 3; Skin Corr. 1B; Eye Dam. 1; Acute Tox. 3 (skn)	NDA

See Section 16 for full text of H-statements and R-phrases.

Section 4 - First Aid Measures

4.1 Description of first aid measures

Inhalation

| Move victim to fresh air. Administer oxygen if breathing is difficult. Give artificial respiration if victim is not breathing.

Skin

| In case of contact with substance, immediately flush skin with running water for at

	least 20 minutes.
Eye	In case of contact with substance, immediately flush eyes with running water for at least 20 minutes.
Ingestion	If swallowed, rinse mouth with water (only if the person is conscious) If large quantities are swallowed, call a physician immediately.

4.2 Most important symptoms and effects, both acute and delayed

| Refer to Section 11 - Toxicological Information.

4.3 Indication of any immediate medical attention and special treatment needed

Notes to Physician	All treatments should be based on observed signs and symptoms of distress in the patient. Consideration should be given to the possibility that overexposure to materials other than this product may have occurred.
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Section 5 - Firefighting Measures

5.1 Extinguishing media

Suitable Extinguishing Media	LARGE FIRE: Water spray, fog or regular foam. SMALL FIRES: Dry chemical, CO ₂ , water spray or regular foam.
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Unsuitable Extinguishing Media	No data available.
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5.2 Special hazards arising from the substance or mixture

Unusual Fire and Explosion Hazards	Some may burn but none ignite readily.
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Hazardous Combustion Products	No data available.
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5.3 Advice for firefighters

| Move containers from fire area if you can do it without risk.
Wear positive pressure self-contained breathing apparatus (SCBA).
Structural firefighters' protective clothing provides limited protection in fire situations ONLY; it is not effective in spill situations where direct contact with the substance is possible.
Wear chemical protective clothing that is specifically recommended by the manufacturer. It may provide little or no thermal protection.

Section 6 - Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal Precautions	Do not walk through spilled material. Wear appropriate protective clothing.
Emergency Procedures	Keep unauthorized personnel away. Stay upwind.

6.2 Environmental precautions

| Avoid run off to waterways and sewers.

6.3 Methods and material for containment and cleaning up

Containment/Clean-up Measures	Stop leak if you can do it without risk. Prevent entry into waterways, sewers, basements or confined areas. SMALL SPILLS: Take up with sand or other non-combustible absorbent material and place into containers for later disposal. LARGE SPILLS: Dike far ahead of liquid spill for later disposal.
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6.4 Reference to other sections

| Refer to Section 8 - Exposure Controls/Personal Protection and Section 13 - Disposal Considerations.

Section 7 - Handling and Storage

7.1 Precautions for safe handling

Handling

- Use good safety and industrial hygiene practices. Avoid contact with skin, eyes, and clothing. Wash thoroughly with soap and water after handling and before eating, drinking, or using tobacco.

7.2 Conditions for safe storage, including any incompatibilities

Storage

- Keep container tightly closed. Store in a cool, dry, well-ventilated place.

7.3 Specific end use(s)

- Refer to Section 1.2 - Relevant identified uses.

Section 8 - Exposure Controls/Personal Protection

8.1 Control parameters

Exposure Limits/Guidelines						
	Result	ACGIH	China	Denmark	Germany DFG	Germany TRGS
Natural flavor (Proprietary)	STELs	15 ppm STEL	20 mg/m ³ STEL	Not established	Not established	Not established
	TWAs	10 ppm TWA	10 mg/m ³ TWA	10 ppm TWA; 25 mg/m ³ TWA	Not established	10 ppm TWA AGW (The risk of damage to the embryo or fetus can be excluded when AGW and BGW values are observed, exposure factor 2); 25 mg/m ³ TWA AGW (The risk of damage to the embryo or fetus can be excluded when AGW and BGW values are observed, exposure factor 2)
	Ceilings	Not established	Not established	Not established	20 ppm Peak; 50 mg/m ³ Peak	Not established
	MAKs	Not established	Not established	Not established	10 ppm TWA MAK; 25 mg/m ³ TWA MAK	Not established
Natural flavor (Proprietary)	STELs	Not established	60 mg/m ³ STEL	Not established	Not established	Not established
	TWAs	10 ppm TWA	30 mg/m ³ TWA	10 ppm TWA; 31 mg/m ³ TWA	Not established	10 ppm TWA AGW (The risk of damage to the embryo or fetus can be excluded when AGW and BGW values are observed, exposure factor 2); 31 mg/m ³ TWA AGW (The risk of damage to the embryo or fetus can be excluded when AGW and BGW values are observed, exposure factor 2)
	Ceilings	Not established	Not established	Not established	20 ppm Peak; 62 mg/m ³ Peak	Not established

	MAKs	Not established	Not established	Not established	10 ppm TWA MAK; 31 mg/m ³ TWA MAK	Not established
2,3-Butanedione (431-03-8)	STELs	0.02 ppm STEL	Not established	Not established	Not established	Not established
	TWAs	0.01 ppm TWA	Not established	Not established	Not established	Not established
Exposure Limits/Guidelines (Con't.)						
	Result	NIOSH		OSHA		
Natural Flavor (Proprietary)	TWAs	10 ppm TWA; 25 mg/m ³ TWA		10 ppm TWA; 25 mg/m ³ TWA		
	STELs	15 ppm STEL; 37 mg/m ³ STEL		Not established		
Natural Flavor (Proprietary)	STELs	15 ppm STEL; 45 mg/m ³ STEL		Not established		
	TWAs	10 ppm TWA; 30 mg/m ³ TWA		Not established		

Exposure Control Notations

ACGIH

•2,3-Butanedione (431-03-8): **Carcinogens:** (A4 - Not Classifiable as a Human Carcinogen)

Germany DFG

•Natural Flavor (Proprietary): **Pregnancy:** (no risk to embryo/fetus if exposure limits adhered to)

•Natural Flavor (Proprietary): **Pregnancy:** (no risk to embryo/fetus if exposure limits adhered to)

Exposure Limits Supplemental

ACGIH

•Natural Flavor (Proprietary): **TLV Basis - Critical Effects:** (eye and upper respiratory tract irritation; pulmonary function)

•2,3-Butanedione (431-03-8): **TLV Basis - Critical Effects:** (lung damage (bronchiolitis obliterans-like illness))

•Natural Flavor (Proprietary): **TLV Basis - Critical Effects:** (eye, skin and upper respiratory tract irritation)

8.2 Exposure controls

Engineering Measures/Controls

- Good general ventilation should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

Personal Protective Equipment

Respiratory

- If occupational limits are exceeded, use a NIOSH/MSHA approved chemical/mechanical respirator designed to remove a combination of particulate and organic vapor. Observe OSHA regulations (29 CFR 1910.134) for respirator use. In case of insufficient ventilation, wear suitable respiratory equipment. Prolonged exposure to vapors may cause lung disease.

Eye/Face

- Wear protective eyewear (goggles, face shield, or safety glasses).

Skin/Body

- No protective clothing expected to be needed.

Environmental Exposure Controls

- Follow best practice for site management and disposal of waste. Controls should be engineered to prevent release to the environment, including procedures to prevent spills, atmospheric release and release to waterways.

Key to abbreviations

ACGIH = American Conference of Governmental Industrial Hygiene
 MAK = Maximale Arbeitsplatz Konzentration is the maximum permissible concentration

NIOSH = National Institute of Occupational Safety and Health

OSHA = Occupational Safety and Health Administration
 Short Term Exposure Limits are based on 15-minute exposures
 STEL = Time-Weighted Averages are based on 8h/day, 40h/week exposures
 TWA = exposures

Section 9 - Physical and Chemical Properties

9.1 Information on Physical and Chemical Properties

Material Description			
Physical Form	Liquid	Appearance/Description	Yellow liquid with a strong butter type odor.
Color	Yellow	Odor	Strong butter type odor.
Odor Threshold	No data available		
General Properties			
Boiling Point	No data available	Melting Point	No data available
Decomposition Temperature	No data available	pH	3 to 3.7
Specific Gravity/Relative Density	0.97 to 1.04	Water Solubility	Appreciable
Viscosity	No data available	Explosive Properties	No data available
Oxidizing Properties:	No data available		
Volatility			
Vapor Pressure	No data available	Vapor Density	No data available
Evaporation Rate	No data available		
Flammability			
Flash Point	> 100 F(> 37.7778 C)	UEL	No data available
LEL	No data available	Autoignition	No data available
Flammability (solid, gas)	No data available		
Environmental			
Octanol/Water Partition coefficient	No data available		

9.2 Other Information

▮ No additional physical and chemical parameters noted.

Section 10: Stability and Reactivity

10.1 Reactivity

▮ No dangerous reaction known under conditions of normal use.

10.2 Chemical stability

▮ Stable

10.3 Possibility of hazardous reactions

▮ Hazardous polymerization will not occur.

10.4 Conditions to avoid

▮ No data available

10.5 Incompatible materials

▮ No data available

10.6 Hazardous decomposition products

▮ No data available

Section 11 - Toxicological Information

11.1 Information on toxicological effects

Components		
Natural Flavor (< 1%)	Proprietary	Acute Toxicity: Ingestion/Oral-Rat LD50 • 3310 mg/kg; Inhalation-Mammal LC50 • 11.4 g/m ³ 4 Hour(s); Skin-Rabbit LD50 • 1060 mg/kg; Irritation: Eye-Rabbit • 5 mg 30 Second(s)-Rinse • Mild irritation; Skin-Rabbit • 525 mg-Open • Severe irritation; Reproductive: Ingestion/Oral-Rat TDLo • 700 mg/kg (18D post); <i>Reproductive Effects: Effects on Newborn: Behavioral</i>
2,3-Butanedione (< 1%)	431-03-8	Acute Toxicity: Ingestion/Oral-Rat LD50 • 1580 mg/kg; <i>Behavioral: Somnolence (general depressed activity); Behavioral: Convulsions or effect on seizure threshold</i> ; Inhalation-Rat TCLo • 224 ppm 1 Hour(s); <i>Lungs, Thorax, or Respiration: Structural or functional change in trachea or bronchi</i> ; Skin-Rabbit LD50 • >5 g/kg; Irritation: Skin-Rabbit • 500 mg 24 Hour(s) • Moderate irritation; Multi-dose Toxicity: Inhalation-Mouse TCLo • 200 ppm 5 Day(s)-Intermittent; <i>Lungs, Thorax, or Respiration: Structural or functional change in trachea or bronchi</i> ; <i>Biochemical: Metabolism (intermediary): Effect on inflammation or mediation of inflammation</i> ; <i>Related to Chronic Data: Death in the Other Multiple Dose data type field</i> ; Mutagen: Unscheduled DNA synthesis • Ingestion/Oral-Rat • 1500 mg/kg
Natural Flavor (< 1%)	Proprietary	Acute Toxicity: Ingestion/Oral-Rat LD50 • 2600 mg/kg; Inhalation-Rat LC50 • >4900 mg/m ³ 4 Hour(s); Skin-Rabbit LD50 • 500 mg/kg; Irritation: Eye-Rabbit • 990 µg • Severe irritation; Skin-Rabbit • 495 mg-Open • Severe irritation; Multi-dose Toxicity: Inhalation-Rat TCLo • 23 mg/m ³ 24 Hour(s) 30 Day(s)-Continuous; <i>Brain and Coverings: Recordings from specific areas of CNS</i> ; <i>Blood: Changes in erythrocyte (RBC) count</i> ; <i>Biochemical: Enzyme inhibition, induction, or change in blood or tissue levels: True cholinesterase</i>

GHS Properties	Classification
Acute toxicity	EU/CLP • Data lacking OSHA HCS 2012 • Data lacking
Aspiration Hazard	EU/CLP • Data lacking OSHA HCS 2012 • Data lacking
Carcinogenicity	EU/CLP • Data lacking OSHA HCS 2012 • Data lacking
Germ Cell Mutagenicity	EU/CLP • Data lacking OSHA HCS 2012 • Data lacking
Skin corrosion/Irritation	EU/CLP • Data lacking OSHA HCS 2012 • Data lacking
Skin sensitization	EU/CLP • Data lacking OSHA HCS 2012 • Data lacking
STOT-RE	EU/CLP • Data lacking OSHA HCS 2012 • Data lacking
STOT-SE	EU/CLP • Data lacking OSHA HCS 2012 • Data lacking
Toxicity for Reproduction	EU/CLP • Data lacking OSHA HCS 2012 • Data lacking
Respiratory sensitization	EU/CLP • Data lacking OSHA HCS 2012 • Data lacking
Serious eye damage/Irritation	EU/CLP • Data lacking OSHA HCS 2012 • Data lacking

Potential Health Effects

Inhalation

Acute (Immediate)

Product is irritating and possibly detrimental to the respiratory system. Inhalation

	symptoms may include sore throat, coughing, dullness, and unconsciousness.
Chronic (Delayed)	<ul style="list-style-type: none"> ▮ Prolonged exposure to high concentrations may cause lung disease (bronchiolitis obliterans).
Skin	
Acute (Immediate)	<ul style="list-style-type: none"> ▮ Product is irritating to the skin.
Chronic (Delayed)	<ul style="list-style-type: none"> ▮ No data available.
Eye	
Acute (Immediate)	<ul style="list-style-type: none"> ▮ Product is irritating to eyes.
Chronic (Delayed)	<ul style="list-style-type: none"> ▮ No data available.
Ingestion	
Acute (Immediate)	<ul style="list-style-type: none"> ▮ Product is harmful if swallowed. Symptoms of ingestion may include sore throat and abdominal pain.
Chronic (Delayed)	<ul style="list-style-type: none"> ▮ No data available.
Other	
Chronic (Delayed)	<ul style="list-style-type: none"> ▮ NIOSH has reported that employees exposed to butter flavorings containing diacetyl are at risk of developing occupational lung diseases and that in one instance, similar illnesses have been found among employees handling flavorings that contain diacetyl.

Key to abbreviations

LC = Lethal Concentration

LD = Lethal Dose

TC = Toxic Concentration

TD = Toxic Dose

Section 12 - Ecological Information

12.1 Toxicity

- ▮ Material data lacking.

12.2 Persistence and degradability

- ▮ Material data lacking.

12.3 Bioaccumulative potential

- ▮ Material data lacking.

12.4 Mobility in Soil

- ▮ Material data lacking.

12.5 Results of PBT and vPvB assessment

- ▮ No PBT and vPvB assessment has been conducted.

12.6 Other adverse effects

- ▮ No studies have been found.

Section 13 - Disposal Considerations

13.1 Waste treatment methods

Product waste	<ul style="list-style-type: none"> ▮ Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.
Packaging waste	<ul style="list-style-type: none"> ▮ Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

Section 14 - Transport Information

	14.1 UN number	14.2 UN proper shipping name	14.3 Transport hazard class(es)	14.4 Packing group	14.5 Environmental hazards
DOT	NDA	Not Regulated	NDA	NDA	NDA
IMO/IMDG	NDA	Not Regulated	NDA	NDA	NDA
IATA/ICAO	NDA	Not Regulated	NDA	NDA	NDA

14.6 Special precautions for user | None specified.

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code | No data available

Section 15 - Regulatory Information

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

SARA Hazard Classifications | None

State Right To Know				
Component	CAS	MA	NJ	PA
2,3-Butanedione	431-03-8	Yes	Yes	Yes
Natural Flavor	Proprietary	Yes	Yes	Yes
Natural Flavor	Proprietary	Yes	Yes	Yes

Inventory						
Component	CAS	Canada DSL	China	EUEINECS	EU ELNICS	Japan ENCS
2,3-Butanedione	431-03-8	Yes	Yes	Yes	No	Yes
Natural Flavor	Proprietary	Yes	Yes	Yes	No	Yes
Natural Flavor	Proprietary	Yes	Yes	Yes	No	Yes

Inventory (Con't.)			
Component	CAS	Korea KECL	TSCA
2,3-Butanedione	431-03-8	Yes	Yes
Natural Flavor	Proprietary	Yes	Yes
Natural Flavor	Proprietary	Yes	Yes

Australia

Labor

Australia - Work Health and Safety Regulations - Hazardous Substances Requiring Health Monitoring

- | | | |
|-------------------|-------------|------------|
| • Natural Flavor | Proprietary | Not Listed |
| • Natural Flavor | Proprietary | Not Listed |
| • 2,3-Butanedione | 431-03-8 | Not Listed |

Australia - High Volume Industrial Chemicals List

- | | |
|------------------|------------------------|
| • Natural Flavor | Proprietary |
| • Natural Flavor | Proprietary Not Listed |

• 2,3-Butanedione	431-03-8	Not Listed
Australia - List of Designated Hazardous Substances - Classification		
• Natural Flavor	Proprietary	C R10, R35
• Natural Flavor	Proprietary	C R34
• 2,3-Butanedione	431-03-8	Not Listed

Environment

Australia - National Pollutant Inventory (NPI) Substance List

• Natural Flavor	Proprietary	10 tonne/yr Threshold category 1
• Natural Flavor	Proprietary	Not Listed
• 2,3-Butanedione	431-03-8	Not Listed

Australia - Ozone Protection Act - Scheduled Substances

• Natural Flavor	Proprietary	Not Listed
• Natural Flavor	Proprietary	Not Listed
• 2,3-Butanedione	431-03-8	Not Listed

Australia - Priority Existing Chemical Program

• Natural Flavor	Proprietary	Not Listed
• Natural Flavor	Proprietary	Not Listed
• 2,3-Butanedione	431-03-8	Not Listed

Europe

Other

EU - CLP (1272/2008) - Annex VI - Table 3.2 - Classification

• Natural Flavor	Proprietary	R10 C; R35
• Natural Flavor	Proprietary	C; R34
• 2,3-Butanedione	431-03-8	Not Listed

EU - CLP (1272/2008) - Annex VI - Table 3.2 - Concentration Limits

• Natural Flavor	Proprietary	10%≤C<25%: Xi; R:36/38 90%≤C: C; R:35 25% ≤C<90%: C; R:34
• Natural Flavor	Proprietary	10%≤C<25%: Xi; R:36/37/38 25%≤C: C; R:34
• 2,3-Butanedione	431-03-8	Not Listed

EU - CLP (1272/2008) - Annex VI - Table 3.2 - Labelling

• Natural Flavor	Proprietary	C R:10-35 S:(1/2)-23-26-45
• Natural Flavor	Proprietary	C R:34 S:(1/2)-23-36-45
• 2,3-Butanedione	431-03-8	Not Listed

EU - CLP (1272/2008) - Annex VI - Table 3.2 - Notes - Substances and Preparations

• Natural Flavor	Proprietary	B
• Natural Flavor	Proprietary	B
• 2,3-Butanedione	431-03-8	Not Listed

EU - CLP (1272/2008) - Annex VI - Table 3.2 - Safety Phrases

• Natural Flavor	Proprietary	S:(1/2)-23-26-45
• Natural Flavor	Proprietary	S:(1/2)-23-36-45
• 2,3-Butanedione	431-03-8	Not Listed

United States

Labor

U.S. - OSHA - Process Safety Management - Highly Hazardous Chemicals

• Natural Flavor	<i>Proprietary</i>	Not Listed
• Natural Flavor	<i>Proprietary</i>	Not Listed
• 2,3-Butanedione	431-03-8	Not Listed

U.S. - OSHA - Specifically Regulated Chemicals

• Natural Flavor	<i>Proprietary</i>	Not Listed
• Natural Flavor	<i>Proprietary</i>	Not Listed
• 2,3-Butanedione	431-03-8	Not Listed

Environment

U.S. - CAA (Clean Air Act) - 1990 Hazardous Air Pollutants

• Natural Flavor	<i>Proprietary</i>	Not Listed
• Natural Flavor	<i>Proprietary</i>	Not Listed
• 2,3-Butanedione	431-03-8	Not Listed

U.S. - CERCLA/SARA - Hazardous Substances and their Reportable Quantities

• Natural Flavor	<i>Proprietary</i>	5000 lb final RQ; 2270 kg final RQ
• Natural Flavor	<i>Proprietary</i>	5000 lb final RQ; 2270 kg final RQ
• 2,3-Butanedione	431-03-8	Not Listed

U.S. - CERCLA/SARA - Radionuclides and Their Reportable Quantities

• Natural Flavor	<i>Proprietary</i>	Not Listed
• Natural Flavor	<i>Proprietary</i>	Not Listed
• 2,3-Butanedione	431-03-8	Not Listed

U.S. - CERCLA/SARA - Section 302 Extremely Hazardous Substances EPCRA RQs

• Natural Flavor	<i>Proprietary</i>	Not Listed
• Natural Flavor	<i>Proprietary</i>	Not Listed
• 2,3-Butanedione	431-03-8	Not Listed

U.S. - CERCLA/SARA - Section 302 Extremely Hazardous Substances TPQs

• Natural Flavor	<i>Proprietary</i>	Not Listed
• Natural Flavor	<i>Proprietary</i>	Not Listed
• 2,3-Butanedione	431-03-8	Not Listed

U.S. - CERCLA/SARA - Section 313 - Emission Reporting

• Natural Flavor	<i>Proprietary</i>	Not Listed
• Natural Flavor	<i>Proprietary</i>	Not Listed
• 2,3-Butanedione	431-03-8	Not Listed

U.S. - CERCLA/SARA - Section 313 - PBT Chemical Listing

• Natural Flavor	<i>Proprietary</i>	Not Listed
• Natural Flavor	<i>Proprietary</i>	Not Listed
• 2,3-Butanedione	431-03-8	Not Listed

United States -California

Environment

U.S. - California - Proposition 65 - Carcinogens List

• Natural Flavor	<i>Proprietary</i>	Not Listed
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• Natural Flavor	<i>Proprietary</i>	Not Listed
• 2,3-Butanedione	431-03-8	Not Listed

U.S. - California - Proposition 65 - Developmental Toxicity

• Natural Flavor	<i>Proprietary</i>	Not Listed
• Natural Flavor	<i>Proprietary</i>	Not Listed
• 2,3-Butanedione	431-03-8	Not Listed

U.S. - California - Proposition 65 - Maximum Allowable Dose Levels (MADL)

• Natural Flavor	<i>Proprietary</i>	Not Listed
• Natural Flavor	<i>Proprietary</i>	Not Listed
• 2,3-Butanedione	431-03-8	Not Listed

U.S. - California - Proposition 65 - No Significant Risk Levels (NSRL)

• Natural Flavor	<i>Proprietary</i>	Not Listed
• Natural Flavor	<i>Proprietary</i>	Not Listed
• 2,3-Butanedione	431-03-8	Not Listed

U.S. - California - Proposition 65 - Reproductive Toxicity - Female

• Natural Flavor	<i>Proprietary</i>	Not Listed
• Natural Flavor	<i>Proprietary</i>	Not Listed
• 2,3-Butanedione	431-03-8	Not Listed

U.S. - California - Proposition 65 - Reproductive Toxicity - Male

• Natural Flavor	<i>Proprietary</i>	Not Listed
• Natural Flavor	<i>Proprietary</i>	Not Listed
• 2,3-Butanedione	431-03-8	Not Listed

United States - Pennsylvania**Labor****U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List**

• Natural Flavor	<i>Proprietary</i>	
• Natural Flavor	<i>Proprietary</i>	
• 2,3-Butanedione	431-03-8	Not Listed

U.S. - Pennsylvania - RTK (Right to Know) - Special Hazardous Substances

• Natural Flavor	<i>Proprietary</i>	Not Listed
• Natural Flavor	<i>Proprietary</i>	Not Listed
• 2,3-Butanedione	431-03-8	Not Listed

15.2 Chemical Safety Assessment

┆ No Chemical Safety Assessment has been carried out.

Section 16 - Other Information**Relevant Phrases (code & full text)**

- ┆ H225 - Highly flammable liquid and vapour
- ┆ H226 - Flammable liquid and vapour
- ┆ H302 - Harmful if swallowed
- ┆ H314 - Causes severe skin burns and eye damage.
- ┆ H315 - Causes skin irritation
- ┆ H319 - Causes serious eye irritation
- ┆ H332 - Harmful if inhaled

H372 - Causes damage to organs through prolonged or repeated exposure.
R10 - Flammable.
R11 - Highly flammable.
R20/22 - Harmful by inhalation and if swallowed.
R34 - Causes burns.
R35 - Causes severe burns.
R36/37/38 - Irritating to eyes, respiratory system and skin.
R48/23 - Toxic: danger of serious damage to health by prolonged exposure through inhalation.

Last Revision Date

| 04/March/2015

Preparation Date

| 04/March/2015

Disclaimer/Statement of Liability

■ The information contained herein is based on the data available to us and is believed to be accurate. However, no warranty is expressed or implied regarding the accuracy of this data or the results to be obtained from the use thereof. We assume no responsibility for the injuries from the use of the product described herein.

Key to abbreviations

NDA = No Data Available
