HULK SUPER BOND
MATERIAL SAFTEY DATA SHEET

SUPREMACY-TPS LTD
60 CASTLEREAGH STREET, BELFAST. BT5 4NH / E-MAIL SUPREMACY-TPS@HOTMAIL.COM

MATERIAL SAFETY DATA SHEET

1. IDENTIFICATION:

Commercial name: Aloe Vera Gel
Botanical Nomenclature: A blend of natural and synthetic products to produce a clear, colourless gel.
INCI name: See INCI Listing
CAS number: n/a (a blend)
EINECS CAS number: n/a
Supplier Details: As listed above.

2. HAZARDS IDENTIFICATION:

Concentrated product. Observe good housekeeping procedures.
Classification of the substance/mixture
Regulation EC No 1272/2008
Class and Category of danger: n/a
Directive 67/548/EEC
Hazard symbols: n/a
Label elements
Regulation EC No 1272/2008
Signal Word: n/a
Hazard Statements: n/a
M factor none
Supplemental Information: n/a
Precautionary Statements: n/a
Pictograms:
Directive 67/548/EEC
Risk Phrases: No information available
Safety Phrases: No information available
Symbols: No information available
Other Hazards: No information available

3. COMPOSITION/INFORMATION ON INGREDIENTS:

Name CAS EC REACH Registration No.	%	Classification for (DSD) 67/548/EEC	Classification for (CLP) 1272/2008
Aqua	>75.0 to ≤100.0		
Aloe Barbadensis Leaf Juice	>1.0 to ≤5.0		
Glycerin	>1.0 to ≤5.0		
Carbomer	>0.1 to ≤1		
Phenoxyethanol	>0.1 to ≤1		
Caprylyl Glycol	>0.1 to ≤1		
Citric Acid	≤0.1		
Sodium Hydroxide	>0.1 to ≤1		
Tetrasodium EDTA	≤0.1		
Potassium Sorbate	≤0.1		
Sodium Benzoate	≤0.1		

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4. FIRST AID:

Inhalation: Not applicable
Skin: Can be applied directly to the skin in accordance with user instructions.
Eyes: Rinse immediately with plenty of water for at least 15 minutes. Contact a doctor if symptoms persist.
Ingestion: Rinse mouth out with water. Seek medical advice immediately.

5. IN CASE OF FIRE:

Extinguishing Media: Use CO_2, Dry Powder or Foam type Extinguishers, sprayi9ng extinguishing media to base of flames. Do not use directs water jet on burning material.
Special Procedures: Avoid vapour inhalation. Keep away from sources of ignition. Do not smoke. Wear positive pressure self-contained breathing apparatus & protective clothing.
Extinguishing Procedures: Closed containers may build up pressure when exposed to heat and should be cooled with water spray.

6. SPILL AND LEAK PROCEDURE:

Personal Precautions: Avoid inhalation & direct contact with skin & eyes. Use individual protective equipment (safety glasses, waterproof-boots, suitable protective clothing) in case of major spillages.
Environmental Precautions: Keep away from drains, soils, surface & ground waters.
Methods For Cleaning Up: Remove all potential ignition sources. Contain spilled material. Cover with an inert or noncombustible inorganic absorbent material, sweep up and remove to an approved disposal container. Observe state, federal & local disposal regulations.

7. HANDLING AND STORAGE:

Handling: Apply good manufacturing practice & industrial hygiene practices, ensuring proper ventilation. Observe good personal hygiene, and do not eat, drink or smoke whilst handling.
Storage: Store in tightly closed original container, in a cool, dry & ventilated area away from heat sources & protected from light. Keep air contact to a minimum.

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Fire Protection: Keep away from ignition sources & naked flames. Take precautions to avoid static discharge in working area.

8. PERSONAL PROTECTION / EXPOSURE CONTROL:

Respiratory Protection: Not applicable
Ventilation Protection: Ensure good ventilation of working area.
Eye Protection: Use safety glasses.
Protective Gloves: Avoid all skin contact. Use chemically resistant gloves if required.
Protective Equipment: Eyewash should be available. Wash hands after handling.
Work/Hygiene Practices: Wash hands with soap & water after handling.
Note: These precautions are for room temperature handling. Use at elevated temperature or aerosol / spray applications may require additional precautions.

9. PHYSIOCHEMICAL PROPERTIES:

Appearance: Viscous, colourless gel with some trapped air
Odour: Fresh, clean, aloe
Specific Gravity: 0.980 – 1.100
pH: 0.980 – 1.100
Known Sensitizers CAS %

10. STABILITY AND REACTIVITY:

Reactivity: It presents no significant reactivity hazards, by itself or in contact with water. Avoid contact with strong acids, alkali or oxidising agents.
Decomposition: Liable to cause smoke & acrid fumes during combustion: carbon monoxide, carbon dioxide & other non-identified organic compounds may be formed.

11. TOXICOLOGICAL INFORMATION:

Data not available

12. ECOTOXICOLOGICAL INFORMATION:

Biodegradability: Data not available
Precautions: Prevent surface contamination of soil, ground & surface water.

13. DISPOSAL METHOD:

Avoid disposing to drainage systems and into the environment. Seek expert advice.

14. TRANSPORT INFORMATION:

Road (ADR/RID): n/a
Air (IATA/ICAO): n/a
SEA (IMDG): n/a

15. REGULATORY INFORMATION

Risk Symbols: No information available
Risk Phrases: No information available
Safety Phrases: No information available
Safety Directions: No information available
Hazard Statements: No information available
Precautionary Statements: No information available

16. OTHER INFORMATION

For Breakdown of statements and phrases please see separate document
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Cosmetics Directive 7th Amendment: Restrictions may apply. A source of allergens as listed below. Check maximum usage levels for skin care products.
Allergens:
Does not contain allergens.
PACKAGING:
Type Suitability
Glass Yes
Lacquer lined steel/tin No
Aluminium Yes
HPPE Yes

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F/HDPE Yes
Other plastic Yes

MATERIAL SAFETY DATA SHEET

1. IDENTIFICATION:

Commercial name: ALOE VERA JUICE
Botanical Nomenclature: The juice expressed from the centre fillet of the plant Aloe barbadensis and preserved.
INCI name: Aloe barbadensis Leaf Juice, Citric Acid, Potassium Sorbate, Sodium Benzoate
CAS number: 85507-69-3 / 94349-62-9
EINECS CAS number:
287-390-8 / 305-181-2
Supplier Details:

2. HAZARDS IDENTIFICATION:

As listed above.
Classification of the substance/mixture
Regulation EC No 1272/2008
Class and Category of danger: N/A
Directive 67/548/EEC
Hazard symbols:
N/A
Label elements
Regulation EC No 1272/2008
Signal Word:
N/A
Hazard Statements: N/A
M factor N/A
Supplemental Information: N/A
Precautionary Statements:
N/A
Pictograms: N/A
Directive 67/548/EEC
Risk Phrases: N/A
Safety Phrases: N/A
Symbols: N/A
Other Hazards: N/A

3. COMPOSITION/INFORMATION ON INGREDIENTS:

Name CAS EC REACH Registration No. % Classification for (DSD) 67/548/EEC Classification for (CLP) 1272/2008
Aloe barbadensis Leaf Juice, 85507-69-3 / 94349-62-9 287-390-8 / 305-181-2

4. First aid:

Inhalation: Remove to fresh air and seek medical advice if necessary.
Skin: Wash the area with soap and water. Seek Medical advice if necessary.
Eyes: Flush immediately with clean water for at least 15 minutes. Seek Medical advice if necessary.
Ingestion:

5. In case of fire:

If necessary, rinse mouth and provide fresh air.
Get medical attention if any discomfort continues.
Extinguishing Media: Carbon Dioxide, Dry Chemical, Universal-Type Foam. Use what is compatible with surrounding materials.
Unsuitable Extinguishing Media: Data Not Available
Unusual Firefighting Hazards: No unusual fire or explosion hazards noted.
Special Procedures: Determine the need to evacuate or isolate the area. Cool closed containers with water.
Protective Equipment: Self-contained breathing apparatus and protective clothing should be worn when fighting fires involving essential oils or chemicals.
Combustion Products:

6. Spill and Leak Procedure:

When heated and in case of fire, toxic vapours/gases may be formed.
Personal Precautions: Use of self-contained breathing apparatus is recommended for any major chemical spill.
Refer also to section 8.
Safety Precautions: Eliminate ALL ignition sources. Ventilate area.
Determine the need to evacuate or isolate the area according to your local emergency plan;
Environmental Precautions: Keep away from drains, surface and ground water. Report spills to appropriate Authorities if required. Also see section 12.

Methods For Cleaning Up:
Contain spill and recover free product. For liquid spills absorb remainder on vermiculite or other suitable absorbent material. Wipe small spills with cloth. For dry spills recover and dispose of free product in accordance with local guidelines.
Clean area with hot water and detergent.

7. Handling and storage:

Handling:
Avoid inhalation and contact with skin and eyes.
Good personal hygiene practices should be used.
Wash after any contact, before breaks and

meals, and at the end of the work period.
Contaminated clothing and shoes should be cleaned before re-use.
Storage: Store in tightly closed original container, in a cool, dry & ventilated area away from heat sources & protected from light. Keep air contact to a minimum.

8. Personal Protection / Exposure control:

Respiratory Protection: No specific recommendation made, but respiratory protection may still be required under exceptional circumstances when excessive air contamination exists.
Ventilation Protection: Ensure adequate ventilation to keep exposure levels to a minimum. General exhaust is recommended.
Eye Protection: Using goggles or face shield is recommended.
Protective Gloves: Use chemical resistant gloves is recommended.
Protective Clothing: Chemical resistant clothing is recommended.
Protective Equipment: Eyewash should be available. Wash hands after handling.
Note: These precautions are for room temperature handling. Use at elevated temperature or aerosol / spray applications may require additional precautions.

9. Physiochemical properties:

Appearance: Colourless. to Amber Clear Mobile Liquid
Odour: Characteristic.
Flash point: Data Not Available
Specific Gravity: 0.997 - 1.004 @ 20°C
Refractive Index: Data Not Available
Known Sensitizers Data Not Available

10. Stability and Reactivity:

Chemical Stability: Stable under normal temperature conditions.
Conditions to avoid: Avoid heat, flames and other sources of ignition.
Materials to avoid: Strong oxidising substances. Strong acids. Strong alkalis.
Flammability: Data Not Available
Hazardous Decomposition Products:

11. Toxicological Information:

In case of fire, toxic gases (CO, CO2, NOx) may be formed.
Swallowed: No specific health warnings noted. No harmful effects expected in amounts likely to be ingested by accident.
Eye: Spray and vapour in the eyes may cause irritation and smarting.

Inhalation: No specific health warnings noted.
Skin: No specific health warnings noted.
Skin Irritation: Persons with rash are directed to skin expert for examination of allergic eczema.
Skin Sensitivity: Data Not Available
Mutagenicity:

12. Ecotoxicological information:

Data Not Available
Ecotoxicity effects
Data Not Available
Persistence and degradability Data Not Available
Bioaccumulative potential: Data Not Available
Information on toxicological effects: Data Not Available
Mobility in soil: Data Not Available
Chronic toxicity: Data Not Available

Results of PBT and vPvB assessment:
Data not available
Sensitization: Data Not Available
Other adverse effects:

13. Disposal Method:

Data Not Available
Check National and Local Regulations.

14. Transport Information:

IMDG/IMO
Proper Shipping Name N/A
Hazard Class N/A
UN/ID no N/A
Packing Group
N/A
ADR/RID
Proper Shipping Name N/A
Hazard Class N/A
UN/ID no N/A
Packing Group N/A
ICAO/IATA
Proper Shipping Name N/A
Hazard Class N/A
UN/ID no N/A
Packing Group N/A
Hazchem Code:

15. Regulatory Information

N/A
Risk Symbols: N/A
Risk Phrases: N/A
Safety Phrases: N/A
Safety Directions: N/A
Hazard Statements: N/A
Precautionary Statements:
N/A

16. Other Information

For Breakdown of statements and phrases please see separate document
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MATERIAL SAFETY DATA SHEET

1. Identification of the substance / mixture and the company

According to 1907/2006/EC, Article 31 as amended by 453/2010/EC

Product identifier

Name of product: Bubblegum

Recommended intended purpose:

Concentrated fragrance material for manufacturing purposes only.

2. Composition / informaion on ingredients **Ingredients:**

Complex mixture of fragrance ingredients **Preparation name:**

Bubblegum Fragrance oil

Component(s) contributing to the health hazards

Chemical Name	**CAS No.** **EC No.**	**Classification 67/548/EEC**	**Classification EC 1272/2008**	**Conc (%)**
Galaxolide (Abbalide) (HHCB) (1,2,3,4,6,7-Hexahydro-4,6,6,7,8,8-hexa methylcyclopenta-2-benzopyran	1222-05-5 214-946-9	N; R50/53	SCI 3;EH A1,C1	>=10%,<25%
Benzyl acetate	140-11-4 205-399-7		FL 4;ATO 5(2490);SCI 3;EH A2	>=10%,<25%
Diethyl phthalate (DEP)	844-66-2 201-550-6	Xn; R20	SCI 3;EH A3	>=10%,<25%
Ethyl butyrate	105-54-4 203-306-4	; R10	FL 3;SCI 3;EH A2	>=10%,<25%
Isoamyl acetate (Isopentyl acetate) (OEL 200mg/kg)	123-92-2 204-662-3	; R10,R66	FL 3;EH A3	>=10%,<25%
Methyl anthranilate (Methyl-2-aminobenzoate)	134-20-3 205-132-4	Xi; R36	ATO 5(2780);SCI 3;EDI 2A;EH A2	>=5%,<10%
d-Limonene (p-Mentha-1,8-diene)	5989-27-5 227-813-5	Xn,N; R10,R38,R43, R50/53,R 65	FL 3;SCI 2;SS 1B;AH 1;EH A1,C1	>=3%,<5%

gamma-Undecalactone (Aldehyde C-peche) (Undeca-1,4-lactone)	104-67-6 203-225-4	N; R51/53	SCI 3;EH A3,C3	>=3%,<5%
Ethyl-3-phenylglycidate	121-39-1 204-467-3	Xi; R43	ATO 5(2300);SS 1B	>=1%,<3%
	106-32-1 203-385-5		FL 4;SCI 3	>=1%,<3%
Methyl salicylate (Oil of Wintergreen)	119-36-8 204-317-7	Xn; R22,R36	ATO 4(890);SCI 3;EDI 2A;EH A3	>=1%,<3%
Vanillin	121-33-5 204-465-2	Xi; R36	ATO 5(3500);EDI 2A	>=1%,<3%
Allyl hexanoate (Allyl caproate) (2-Propenyl hexanoate)	123-68-2 204-642-4	Xn,N; R21/22,R38,R 51/53	FL 4;ATO 3(300);ATD 3(300);ATI 3;EH A1,C3	>=1%,<3%
Ethyl methyl phenyl glycidate (Aldehyde C16) (Fraise)	77-83-8 201-061-8	; R52/53	SS 1;EH A2,C2	>=0.1%,<1%

3. Hazards identifaction

Special hazards information for humans and environment

Classification of the substance or mixture GHS

Classification according to EC1272/2008 FL 3

Flammable liquid, category 3 :

ATO 5 Acute toxicity, oral, category 5 : SCI 3

Skin corrosion/irritation, category 3 : SS 1 Skin

sensitisation :

EDI 2A Eye damage/irritation, category 2A : EH

A1 Aquatic hazard, acute, category 1 : EH C1

Aquatic hazard, chronic, category 1.

4. First aid measures

General information:

In all cases of doubt, or when symptoms persist, seek medical attention.
Never give anything by mouth to an unconscious person.
For symptom description, see section 11

Incase of inhalation: Remove patient to fresh air. Contact a doctor if necessary.

Incase of skin contact: Remove contaminated clothing. Immediately wash affected skin with plenty of soap and water. Seek medical advice if irritation persisits.

Incase of eye contact: Flush with plenty of water and seek medical advice if necessary

Incase of ingestion: Wash mouth with plenty of water and obtain medical advice immediately

5. Fire fighting measures

Suitable estinguishing media: Foam
Dry Powder
DO NOT USE A DIRECT WATER JET

Specific fire hazards:

Special protective equipment for fire fighters: Use breathing apparatus with independant air supply (isolated)

Additional information: Cool endangered containers with water spray jet

6. Accidental release measures

Personal precautions: Remove all sources of ignition
Avoid inhalation, skin and eye contact
Ensure proper ventilation

Environmental precautions: Do not discharge into drains / surface waters / ground water

Methods for cleaning up: Soak up spillage with sand or other inert absorbant material such as earth, do not use sawdust, transfer used material into a suitable waste container and dispose in accordance with regulations

7. Handling and Storage

Advice on safe handling: Maintain good occupational and personal hygiene. Avoid inhalation and contact with skin and eyes.

Advice on protectionagainst fire and explosion: Keep away from sources of heat or ignition – No smoking.

Further information on storage containers: Store in tighlty sealed original container in a cool place.

8. Exposure controls – personal protection

Additional advice on system design: Maintain adequate ventilation

Respiratory protection: Not generally required. (Use inhalation protection in poorly ventialted areas).

Eye protection:	Wear Safety goggles
Skin protection:	Wear chemically resistant disposable gloves

General protective measures: Wear suitable protective clothing
Hygiene measures: Wash hands before breaks and after work

9. Physical and chemical properties

Information on basic physical and chemical properties: Solid, Pale yellow, characterisitic
PH value in delivery state: not applicable
Flash Point: 30°C
Lower explosion limit:
Upper explosion limit:
Density:
Water solubility: insoluble

10. Stability and Reactivity

Conditions to avoid: Heat and sources of ignition.
Materials to avoid: Highly reactive chemicals which may produce unknown reaction products and so cause additional hazards.
Thermal decomposition: Not determined.

11. Toxicological information

Not available; avoid soil, surface water and water-bearing stratum contamination. Treat as trade effluent.

12. Ecological information

Not available; avoid soil, surface water and water-bearing stratum contamination.

13. Disposal considerations

Disposal in accordance with local regulations.

14. Transport information

UN Number : 1993

Shipping Name : FLAMMABLE LIQUID, N.O.S. (CONTAINS ISOAMYLACETATE):

Class: 3

Packing Group: III

Tunnel Code: (D/E)

Chemical safety assessment
No data available at this time

Contains Citral and Limonene which may produce an allergic reaction

15. Regulatory information

Safety, health and environmental regulations/legislation specific for the substance or mixture No

relevant information available at this time

16. Other information

The information contained herin is based in the state of our knowledge. It charecterizes the product with regard to the appropriate safety precautions. It does not represent a guarentee of the properties of the product.

Total fractional values:

Xn	0.9960	Xn	0.0800	Xn	0.1200
R36	0.4305	R38	0.2851	R43	3.6100
R50	0.5444	R50/53	0.5444	R51/53	5.6448
R53	0.7492	R65	0.3686	R66	1.1400

Text of the risk and safety phrases listed in section 2

R10	Flammable
R43	May cause sensitisation by skin contact
R51/53	Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment
R66	Repeated exposure may cause skin dryness or cracking S16 Keep away from sources of ignition - No smoking
S2	Keep out of the reach of children
S24	Avoid contact with skin
S36/37/39	Wear suitable protective clothing, gloves and eye/face protection
S61	Avoid release to the environment. Refer to special instructions/safety data sheet P210

Keep away from heat, sparks, open flames and hot surfaces. - No smoking.

P261	Avoid breathing fumes.
P264	Wash hands thoroughly after handling
P273	Avoid release to the environment.
P280	Wear protective gloves and eye protection
P312	Call a POISON CENTRE or doctor/physician if you feel unwell.
P332+P313	If skin irritation occurs: Get medical advice.
P337+P313	If eye irritation persists: Get medical attention.
P391	Collect spillage. Hazardous to the aquatic environment
P403+P235	Store in a well-ventilated place. Keep cool.

Text of the risk phrases listed in section 3

R10	Flammable
R20	Harmful by inhalation
R21/22	Harmful in contact with skin and if swallowed
R22	Harmful if swallowed
R36	Irritating to eyes
R38	Irritating to skin
R43	May cause sensitisation by skin contact
R50/53	Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment
R51/53	Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment
R52/53	Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment
R65	Harmful: may cause lung damage if swallowed
R66	Repeated exposure may cause skin dryness or cracking

IFRA Conformity Certificate

Compound Name: BUBBLE GUM

We certify that the above compound is in compliance with the standards of the INTERNATIONAL FRAGRANCE ASSOCIATION (IFRA-47th amendment, published June 2013), provided it is used at a maximum concentration level of:

IFRA category (*)	Maximum level of use (%)(w/w) (**)
1A,1B (***)	*N/A (***)*
2	*N/A*
3A	*N/A*
3B	*N/A*
3C	*N/A*
3D	*N/A*
4A	*N/A*
4B	*N/A*
4C	*N/A*
4D	*N/A*
5	*N/A*
6 (***)	*N/A (***)*
7A	*N/A*
7B	*N/A*
8A	*N/A*
8B	*N/A*
9A	*N/A*
9B	*N/A*
9C	*N/A*
10A	*N/A*
10B	*N/A*
11A	*N/A*
11B	*N/A*

(*) See annex for definition of IFRA categories

(**) Usage limit N/A = Not Applicable; no IFRA restrictions

(***) IFRA would recommend that any material used to impart perfume or flavour in products intended for human ingestion should consist of ingredients that are in compliance with appropriate regulations for foods and food flavourings

For other kinds of application or use at higher concentrations, a new safety evaluation may be needed; please contact Bee Beautiful Ltd

The IFRA Standards regarding restrictions are based on safety assessments by the Panel of Experts of the RESEARCH INSTITIUTE FOR FRAGRANCE MATERIALS (RIFM) and are enforced by the IFRA Scientific Committee.

Evaluation of individual Fragrance ingredients is made according to the safety standards contained in the relevant section of the IFRA Code of Practice.

It is the ultimate responsibility of our customer to ensure the safety of the final product (containing this fragrance) by further testing if need be.

ANNEX: Definition of IFRA categories

Finished Product Types	***IFRA category***
Lip products of all types (solid and liquid lipsticks, balms,clear or coloured, lipwax, etc.) Toys	*1A (**)*
Waxes for mechanical hair removal	*1B*
Deodorant and Antiperspirant Products of all types (pump spray, aerosol spray, stick, roll-on, under-arm and body, etc.) *Fragranced Bracelets*	*2*
Hydroalcoholic Products applied to recently shaved skin - EdT	*3A*
Hydroalcoholic Products applied to recently shaved skin- Fine fragrance	*3B*
Eye Products of all types (eye shadow, mascara, eyeliner, eye make-up, etc.) including eye care Men's Facial Creams and Balms; Baby Creams, Lotions, Oils; Body Paint for Children	*3C*
Tampons	*3D*
EdT: Hydroalcoholic Products applied to unshaved skin, Ingredients of Perfume Kits, Scent Pads, Foil Packs, *Scent Strips for Hydroalcoholic Products*	*4A*
Hydroalcoholic Products applied to unshaved skin - Fine fragrance	*4B*
Hair styling aids sprays of all types (pumps, aerosol sprays etc.), Hair Deodorant *Body Creams, Oils, Lotions, Fragrancing Creams of all types (except baby creams, lotions and oils)* *Fragrance Compounds for Cosmetic Kits, Foot Care Products, Body Paint for Adults*	*4C*
Fragrancing cream	*4D*
Women's Facial Creams/Facial Make-up, Hand Cream, Facial Masks Hand Sanitisers, Wipes or Refreshing Tissues for Face, Neck, Hands, Body *Baby Powder and Talc* *Hair Permanent and Other Hair Chemical Treatments (e.g. relaxers) but not hair dyes, Dry Shampoo or Waterless Shampoo*	*5*
Mouthwash, including Breath Sprays, Toothpaste	*6 (**)*
Intimate Wipes, Baby Wipes	*7A*
Insect Repellent (intended to be applied to the skin)	*7B*
Make-up Removers of all types (not including face cleansers) *Hair Styling Aids Non-Spray of all types (mousse, gels, leavein conditioners, etc.) Nail Care, Powders and talcs (not including baby powders and talcs)*	*8A*
Hair Dyes	*8B*
Shampoos of all types (including baby shampoos), Conditioner (Rinse-Off), *Face Cleansers of all types (washes, gels, scrubs, etc.), Liquid Soap, Bar Soap (Toilet Soap),* *Depilatory(not including waxes for mechanical hair removal), Shaving Creams of all types (stick, gels, foams, etc.)* *Body Washes of all types (including baby washes) and Shower Gels of all types Bath Gels, Foams, Mousses, Salts, Oils and other products added to bathwater*	*9A*
Feminine Hygiene – pads, liners, Toilet Paper *Wheat bags*	*9B*
Other' Aerosols (incl. air freshener sprays and air freshener pump sprays, but not deodorants / antiperspirants, hair styling aids spray and animal sprays) *Facial Tissues, Napkins, Paper Towels*	*9C*
Handwash Laundry Detergents of all types including concentrates *Machine Wash Laundry Detergents (liquids, powders, tablets etc.) including laundry bleaches and concentrates* *Fabric Softeners of all types including fabric softener sheets, Hand Dishwashing Detergent including concentrates* *Hard Surface Cleaners of all types (bathroom and kitchen cleansers, furniture polish etc.) Other Household Cleaning Products (fabric cleaners, soft surface cleaners, carpet cleaners etc.)* *Dry Cleaning Kits, Shampoo for pets*	*10A*
Diapers, Toilet Seat Wipes	*10B*
All non-skin contact including: *Air Fresheners and Fragrancing of all types (concentrated aerosol air fresheners, plug-ins, solid substrate, membrane delivery, ambient,* *electrical..) excluding aerosol products, Liquid refills for air fresheners (cartridge systems), Scent delivery system using a dry air technology that releases a fragrance without sprays, aerosols or heated oils (technology of nebulization),* *Air delivery systems* *Candles, Joss Sticks, Incense, Air freshening crystals, Fragranced lamp ring, Scent pack, Machine Only Laundry Detergent (e.g. liquitabs)*	*11A*

Toilet Blocks, Insecticides (mosquito coil, paper, electrical, for clothing etc.) excluding aerosols Fuels, Paints, Floor wax, Plastic articles (excluding toys)	
All incidental skin contact including: *Pot pourri, powders, fragrancing sachets, incense, Reed diffusers, Liquid refills for airfresheners (non-cartrige systems)* *Odoured Distilled Water (that can be added to steam irons), Machine Dishwash Detergent and Deodorizers* *Deodorizers/Maskers not intended for skin contact (e.g. fabric drying machine deodorizers, carpet powders)* *Treated Textiles (e.g. starch sprays, fabric treated with fragrances after wash, deodorizers for textiles or fabrics, tights with moisturizers)* *Infused socks, Scratch and sniff (sampling technology) Shoe Polishes, Cat litter, Animal Sprays (all types)*	*11B*

(**) This IFRA certificate does not include a GRAS-FEMA conformity check

Allergen Analysis

Fragrance ingredients	*CAS No:*	*Concentration present as a percentage (%) or 'A' for absent in fragrance*		
		Added as such	*From natural & other source*	*Total*
alpha-iso-Methylionone	*127-51-5*	*A*	*A*	*A*
Amyl Cinnamal	*122-40-7*	*A*	*A*	*A*
Amylcinnamyl Alcohol	*101-85-9*	*A*	*A*	*A*
Anise Alcohol	*105-13-5*	*A*	*A*	*A*
Benzyl Alcohol	*100-51-6*	*A*	*A*	*A*
Benzyl Benzoate	*120-51-4*	*A*	*A*	*A*
Benzyl Cinnamate	*103-41-3*	*A*	*A*	*A*
Benzyl Salicylate	*118-58-1*	*A*	*A*	*A*
Butylphenyl Methylpropional (Lilial)	*80-54-6*	*A*	*A*	*A*
Cinnamal	*104-55-2*	*A*	*A*	*A*
Cinnamyl Alcohol	*104-54-1*	*A*	*A*	*A*
Citral	*106-26-3* *141-27-5* *5392-40-5*	*A*	*0.01*	*0,.01*
Citronellol	*106-22-9* *1117-61-9* *141-25-3* *6812-78-8* *68916-43-8* *7540-51-4*	*A*	*A*	*A*
Coumarin	*91-64-5*	*A*	*A*	*A*
Eugenol	*97-53-0*	*A*	*A*	*A*
Evernia Furfuraceae (Tree Moss) Extract	*90028-67-4*	*A*	*A*	*A*
Evernia Prunastri (Oak Moss) Extract	*90028-68-5*	*A*	*A*	*A*
Farnesol	*4602-84-0*	*A*	*A*	*A*
Geraniol	*106-24-1*	*A*	*A*	*A*

Hexyl Cinnamal	*101-86-0*	*A*	*A*	*A*

Hydoxycitronellal	*107-75-5*	*A*	*A*	*A*
Hydroxyisohexyl 3-Cyclohexene Carboxaldehyde (Lyral)	*31906-04-4*	*A*	*A*	*A*
Isoeugenol	*97-54-1*	*A*	*A*	*A*
Limonene	*138-86-3* *5989-27-5* *5989-54-8*	*A*	*3.61*	*3.61*
Linalool	*126-90-9* *126-91-0* *78-70-6*	*A*	*A*	*A*
Methyl 2-Octynoate	*111-12-6*	*A*	*A*	*A*

MATERIAL SAFETY DATA SHEET

NFPA	HMIS	Personal Protective Equipment
	Health Hazard 1 Fire Hazard 1 Reactivity 0	 See Section 15.

Section 1. Chemical Product and Company Identification

Common Name/ Trade Name	**Carbomer 672, 690, 910, 934, 934P,940, 941**
Catalog Number(s).	XX205 , C1148 , C1149 , C1182 , C1183 , C1184 , C1186 , C1477 , C1478, CA184, CA251
CAS#	9003-01-4
RTECS	FF3190000
TSCA	TSCA 8(b) inventory: Carbomer 672, 690, 910, 934, 934P, 940, 941
Commercial Name(s)	Carbopol 910, 934, 934P, 940, 941
CI#	Not applicable.
Synonym	Acrylic acid polymer; Poly(acrylic acid); 2-Propenoic acid, homopolymer; Acrylic acid polymer cross-linked with allyl ethers of pentaerythritol and/or sucrose; Carboxypolymethylene; Acrylic acid homopolymer; Acrylic acid resin; Acrysol; Anatiprex; Arasorb; Arolon; Aron; Carboxy vinyl polymer; Carpolene; Polymer, carboxy vinyl; Polyacrylate elastomers; Tecpol
Chemical Name	Acrylic acid, polymers
Chemical Family	Polymer.
Chemical Formula	POLYMER (C3-H4-O2)x
Supplier	SPECTRUM LABORATORY PRODUCTS INC. 14422 S. SAN PEDRO STREET GARDENA, CA 90248

Section 2.Composition and Information on Ingredients

		Exposure Limits			
Name	**CAS #**	**TWA (mg/m^3)**	**STEL (mg/m^3)**	**CEIL (mg/m^3)**	**% by Weight**
1) Carbomer 910, 934, 934P, 940, 941	9003-01-4				100

Toxicological Data on Ingredients Not applicable.

Continued on Next Page

Section 3. Hazards Identification

Potential Acute Health Effects	Slightly hazardous in case of skin contact (irritant), of eye contact (irritant), of ingestion, of inhalation.
Potential Chronic Health Effects	**CARCINOGENIC EFFECTS**: 3 (Not classifiable for human.) by IARC. **MUTAGENIC EFFECTS**: Not available. **TERATOGENIC EFFECTS**: Not available. **DEVELOPMENTAL TOXICITY**: Not available. The substance may be toxic to upper respiratory tract, skin, eyes. Repeated or prolonged exposure to the substance can produce target organs damage.

Section 4. First Aid Measures

Eye Contact	Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Cold water may be used. Get medical attention if irritation occurs.
Skin Contact	Wash with soap and water. Cover the irritated skin with an emollient. Get medical attention if irritation develops. Cold water may be used.
Serious Skin Contact	Not available.
Inhalation	If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.
Serious Inhalation	Not available.
Ingestion	Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention if symptoms appear.
Serious Ingestion	Not available.

Section 5. Fire and Explosion Data

Flammability of the Product	May be combustible at high temperature.
Auto-Ignition Temperature	520°C (968°F)
Flash Points	Not available.
Flammable Limits	Not available.
Products of Combustion	These products are carbon oxides (CO, CO2), phosphates.
Fire Hazards in Presence of Various Substances	Slightly flammable to flammable in presence of heat.
Explosion Hazards in Presence of Various Substances	Risks of explosion of the product in presence of mechanical impact: Not available. Risks of explosion of the product in presence of static discharge: Not available.
Fire Fighting Media and Instructions	SMALL FIRE: Use DRY chemical powder. LARGE FIRE: Use water spray, fog or foam. Do not use water jet.
Special Remarks on Fire Hazards	As with most organic solids, fire is possible at elevated temperatures. Material in powder form, capable of creating a dust explosion.
Special Remarks on Explosion Hazards	Fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard.

Continued on Next Page

Section 6. Accidental Release Measures

Small Spill	Use appropriate tools to put the spilled solid in a convenient waste disposal container. Finish cleaning by spreading water on the contaminated surface and dispose of according to local and regional authority requirements.
Large Spill	Use a shovel to put the material into a convenient waste disposal container. Finish cleaning by spreading water on the contaminated surface and allow to evacuate through the sanitary system. Be careful that the product is not present at a concentration level above TLV. Check TLV on the MSDS and with local authorities.

Section 7. Handling and Storage

Precautions	Keep away from heat. Keep away from sources of ignition. Ground all equipment containing material. Do not ingest. Do not breathe dust. If ingested, seek medical advice immediately and show the container or the label.
Storage	Keep container tightly closed. Keep container in a cool, well-ventilated area.

Section 8. Exposure Controls/Personal Protection

Engineering Controls	Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.
Personal Protection	Safety glasses. Lab coat. Dust respirator is ot normally required. Use a dust respirator if ventilation is not adequate and if handling of material (particularly in large quantities) creates visible dust clouds. Be sure to use an approved/certified respirator or equivalent. Gloves.
Personal Protection in Case of a Large Spill	Splash goggles. Full suit. Dust respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.
Exposure Limits	Not available.

Section 9. Physical and Chemical Properties

Physical state and appearance	Solid. (Powdered solid.)	**Odor**	Acetic acid. (Slight.)
Molecular Weight	Not available.	**Taste**	Not available.
pH (1% soln/water)	2.5 - 3.0 [Acidic.]	**Color**	White.
Boiling Point	Not available.		
Melting Point	Not available.		
Critical Temperature	Not available.		
Specific Gravity	1.4 (Water = 1)		
Vapor Pressure	Not applicable.		
Vapor Density	Not available.		
Volatility	Not available.		
Odor Threshold	Not available.		
Water/Oil Dist. Coeff.	Not available.		
Ionicity (in Water)	Not available.		
Dispersion Properties	See solubility in water.		
Solubility	Easily soluble in cold water, hot water.		

Continued on Next Page

Section 10. Stability and Reactivity Data

Stability	The product is stable.
Instability Temperature	Not available.
Conditions of Instability	Excess heat, incompatible materials, dust generation.
Incompatibility with various substances	Reactive with alkalis.
Corrosivity	Non-corrosive in presence of glass.
Special Remarks on Reactivity	Heat may be generated if polymer comes in contact with strong basic materials such as ammonia, sodium hydroxide, postassium hydroxide or stronly basic amines.
Special Remarks on Corrosivity	Not available.
Polymerization	Will not occur.

Section 11. Toxicological Information

Routes of Entry	Dermal contact. Inhalation. Ingestion.
Toxicity to Animals	Acute oral toxicity (LD50): 2000 mg/kg [Guinea pig]. Acute dermal toxicity (LD50): 3000 mg/kg [Rabbit].
Chronic Effects on Humans	**CARCINOGENIC EFFECTS**: 3 (Not classifiable for human.) by IARC. May cause damage to the following organs: upper respiratory tract, skin, eyes.
Other Toxic Effects on Humans	Slightly hazardous in case of skin contact (irritant), of ingestion, of inhalation.
Special Remarks on Toxicity to Animals	Not available.
Special Remarks on Chronic Effects on Humans	Not available.
Special Remarks on other Toxic Effects on Humans	Acute Potential Health Effects: Skin: May cause skin irritation. Eyes: Dust may cause irritation by mechanical action, not by chemical effect. Inhalation: Inhalation of dust may cause irritation by mechanical action, not by chemical effect. Symptoms may include coughing, mucous production, and shortness of breath Ingestion: Low hazard. Chronic Potential Health Effects: Skin: Prolonged or repeated skin contact may cause dermatits. Medical Conditions Aggravated by Exposure: Pre-existing respiratory diseases; pre-existing skin problems. I

Section 12. Ecological Information

Ecotoxicity	Ecotoxicity in water (LC50): 580 - 2000 mg/l 96 hours [Fish (Bluegill, Sunfish)]. 168 - 280 mg/l 96 hours [Daphnia (daphnia)].
BOD5 and COD	Not available.
Products of Biodegradation	Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.
Toxicity of the Products of Biodegradation	The product itself and its products of degradation are not toxic.
Special Remarks on the Products of Biodegradation	Not available.

Continued on Next Page

Section 13. Disposal Considerations

Waste Disposal Waste must be disposed of in accordance with federal, state and local environmental control regulations.

Section 14. Transport Information

DOT Classification Not a DOT controlled material (United States).

Identification Not applicable.

Special Provisions for Transport Not applicable.

DOT (Pictograms)

Section 15. Other Regulatory Information and Pictograms

Federal and State Regulations TSCA 8(b) inventory: Carbomer 672, 690, 910, 934, 934P, 940, 941

California Proposition 65 Warnings California prop. 65: This product contains the following ingredients for which the State of California has found to cause cancer which would require a warning under the statute: No products were found.

California prop. 65: This product contains the following ingredients for which the State of California has found to cause birth defects which would require a warning under the statute: No products were found.

Other Regulations Canada: Listed on Canadian Domestic Substance List (DSL). China: Listed on National Inventory. Japan: Listed on National Inventory (ENCS). Korea: Listed on National Inventory (KECI). Philippines: Listed on National Inventory (PICCS). Australia: Listed on AICS.

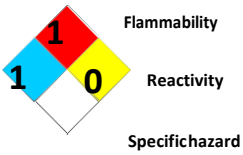
Other Classifications

WHMIS (Canada) Not controlled under WHMIS (Canada).

DSCL (EEC) This product is not classified according to the EU regulations. Not applicable.

HMIS (U.S.A.)

National Fire Protection Association (U.S.A.)



WHMIS (Canada) (Pictograms)

DSCL (Europe) (Pictograms)

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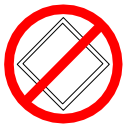
TDG (Canada) (Pictograms)



ADR (Europe) (Pictograms)

Protective Equipment

Gloves.

Lab coat.

Dust respirator. Be sure to use an approved/certified respirator or equivalent.

Safety glasses.

Section 16. Other Information

MSDS Code	**C3608**
References	Not available.
Other Special Considerations	Uses: Thickening agent and emulsifiers in printing and in pharmaceuticals

Notice to Reader

MATERIAL SAFETY DATA SHEET

1.	**Product Identification**	**Colour: Carmoisine** **CAS NO: 3567-69-9(100%)**
2.	**Hazards Identification:**	**Not classified as dangerous goods by the criteria of the Dangerous goods code (ADG code)** **For transport by road and rail: NON-DANGEROUS GOODS.** **Based on available information, not classified as hazardous according to** **Safe Work; NON-HAZARDOUS SUBSTANCE.** **Poisons Schedule (SUSMP): None allocated.**
3.	**Composition / Information on Ingredients:**	**Components** **CAS Number** **Proportion** **Hazard Codes** **C.I. Food Red 3** **3567-69-9** **100%** -
4.	**First Aid Measures:**	**First Aid Procedures** **Inhalation:** **Remove victim from area of exposure - avoid becoming a casualty. Remove contaminated clothing and loosen remaining clothing. Allow patient to assume most comfortable position and keep warm. Keep at rest until fully recovered. Seek medical advice if effects persist.** **Skin Contact:** **If skin or hair contact occurs, remove contaminated clothing and wash skin and hair with soap and water. If irritation occurs seek medical advice.** **Eye Contact:** **If in eyes, wash out immediately with water. In all cases of eye contamination it is a sensible precaution to seek medical advice.**

Ingestion:
Rinse mouth with water. If swallowed, do NOT induce vomiting. Give a glass of water. Seek medical advice.

Indication of immediate medical attention and special treatment needed:
Treat symptomatically.

5. Fire Fighting Measures:	**Suitable Extinguishing Media:** **Fine water spray, normal foam, dry agent (carbon dioxide, dry chemical powder).** **Unsuitable Extinguishing Media:** **Water jet.** **Specific hazards arising from the substance or mixture:** **Combustible solid. On burning will emit toxic fumes, including those of oxides of carbon , oxides of nitrogen , oxides of sulfur and sometimes hydrogen cyanide .** **Special protective equipment and precautions for fire-fighters:** **Fire fighters to wear self-contained breathing apparatus and suitable protective clothing if risk of exposure to vapour or products of combustion. Keep containers cool with water spray**
6. Accidental Release Measures:	**Emergency procedures/Environmental precautions:** **Shut off all possible sources of ignition. If contamination of sewers or waterways has occurred advise local emergency services.** **Personal precautions/Protective equipment/Methods and materials for containment and cleaning up: Wear protective equipment to prevent skin and eye contact and breathing in dust. Work up wind or increase ventilation. Cover with damp absorbent (inert material, sand or soil). Sweep or vacuum up, but avoid generating dust. Collect and seal in properly labelled containers or drums for disposal. Wash area down with excess water. Recover the cleaning water for subsequent disposal.**

Handling and Storage:

Precautions for safe handling:
Avoid skin and eye contact and breathing in dust.
Avoid handling which leads to dust formation. In common with many organic chemicals, may form flammable dust clouds in air. For precautions necessary refer to Safety Data Sheet "Dust Explosion Hazards". Take precautionary measures against static discharges.

Conditions for safe storage, including any incompatibilities:
Store in a cool, dry, well ventilated place and out of direct sunlight. Store away from sources of heat or ignition. Store away from incompatible materials described in Section 10. Keep containers closed when not in use - check regularly for spills.

7.

8. Exposure Controls / Personal Protection:

Control Parameters: No value assigned for this specific material by Safe Work Australia. However, Workplace Exposure Standard(s) for particulates:

Dusts not otherwise classified: 8hr TWA = 10 mg/m3

As published by Safe Work Australia Workplace Exposure Standards for Airborne Contaminants.

TWA - The time-weighted average airborne concentration of a particular substance when calculated over an eight-hour working day, for a five-day working week.

These Workplace Exposure Standards are guides to be used in the control of occupational health hazards. All atmospheric contamination should be kept to as low a level as is workable. These workplace exposure standards should not be used as fine dividing lines between safe and dangerous concentrations of chemicals. They are not a measure of relative toxicity.

Appropriate engineering controls:
Ensure ventilation is adequate to maintain air concentrations below Workplace Exposure Standards. Avoid generating and breathing in dusts. Use with local exhaust ventilation or while wearing dust mask. Keep containers closed when not in use.

Individual protection measures, such as Personal Protective Equipment (PPE):
The selection of PPE is dependent on a detailed risk assessment. The risk assessment should consider the work situation, the physical form of the chemical, the handling methods, and environmental factors.
OVERALLS, SAFETY SHOES, SAFETY GLASSES, GLOVES, DUST MASK.

Wear overalls, safety glasses and impervious gloves. Avoid generating and inhaling dusts. If determined by a risk assessment an inhalation risk exists, wear a dust mask/respirator meeting the requirements of AS/NZS 1715 and AS/NZS 1716. Always wash hands before smoking, eating, drinking or using the toilet. Wash contaminated clothing and other protective equipment before storage or re-use.

Physical and Chemical Properties:

Physical state: Fine powder or Granules
Colour: Dark Red

Odour: Odourless
Odour Threshold: Not available
Solubility: Soluble in water.
Specific Gravity: Not available Relative Vapour Density (air=1): Not available Vapour Pressure (20 °C): Not available Flash Point (°C): Not available Flammability Limits (%): Not available Autoignition Temperature (°C): Not available
Melting Point/Range (°C): Decomposes before melting Boiling Point/Range (°C): Not available Decomposition Point (°C): Not available
pH: Not available
Viscosity: Not available
Partition Coefficient: Not available

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9. Chemical Stability and Reactivity Information:

Reactivity: No information available.
Chemical stability: Stable under normal conditions of use.
Possibility of hazardous reactions:
Hazardous polymerisation will not occur.
Conditions to avoid: Avoid exposure to heat, sources of ignition, and open flame. Avoid dust generation. Incompatible materials: Incompatible with strong acids , strong bases and strong oxidising agents .

Hazardous decomposition products:
Oxides of carbon. Oxides of nitrogen. Oxides of sulfur. Hydrogen cyanide

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10. Toxicological Information:

No adverse health effects expected if the product is handled in accordance with this Safety Data Sheet and the product label. Symptoms or effects that may arise if the product is mishandled and overexposure occurs are:

Ingestion: No adverse effects expected, however, large amounts may cause nausea and vomiting.

Eye contact: May be an eye irritant. Exposure to the dust may cause discomfort due to particulate nature. May cause physical irritation to the eyes.

Skin contact: Repeated or prolonged skin contact may lead to irritation.

Inhalation: Breathing in dust may result in respiratory irritation.

Acute toxicity:
Oral LD50 (rat): >10,000 mg/kg (1)

Skin corrosion/irritation: May cause mechanical irritation.

Serious eye damage/irritation: May cause mechanical irritation.

Respiratory or skin sensitisation:
No information available.

Chronic effects: No information available for the product.

Mutagenicity: No information available.
Carcinogenicity: Not listed as carcinogenic according to IARC. (2)
Reproductive toxicity: No information available.

Specific Target Organ Toxicity (STOT) - single exposure: Specific Target Organ Toxicity (STOT) - repeated exposure:
No information available. No information available.Aspiration hazard: No information available.

11. Ecological Information:	**Ecotoxicity Avoid contaminating waterways.** **Persistence/degradability: The material is biodegradable. (2)** **Bioaccumulative potential: No information available.** **Mobility in soil: No information available.**
12. Disposal Considerations	**Disposal methods:** **Refer to Waste Management Authority. Dispose of contents/container in accordance with local/regional/national/international regulations.**
13. Regulatory Information:	**Classification:** **Based on available information, not classified as hazardous according to Safe Work Australia; NON-HAZARDOUS SUBSTANCE.** **Poisons Schedule (SUSMP): None allocated.** **This material is listed on the Australian Inventory of Chemical Substances (AICS).**
14. Transport Information:	**Road and Rail Transport** **Not classified as Dangerous Goods by the criteria of the Australian Dangerous Goods Code (ADG Code) for transport by Road and Rail; NON-DANGEROUS GOODS.** **Marine Transport** **Not classified as Dangerous Goods by the criteria of the International Maritime Dangerous Goods Code (IMDG Code) for transport by sea; NON-DANGEROUS GOODS.** **Air Transport** **Not classified as Dangerous Goods by the criteria of the International Air Transport Association (IATA) Dangerous Goods Regulations for transport by air; NON-DANGEROUS GOODS.**

15. Other Information	**`Registry of Toxic Effects of Chemical Substances'. Ed. D. Sweet, US Dept. of Health & Human Services: Cincinatti, 2012.**
	Supplier Safety Data Sheet; 11/ 2012.

End of SDS

MATERIAL SAFETY DATA SHEET

1 . IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND THE COMPANY:

PRODUCT NAME:	ETHANOL
CHEMICAL NAME 2:	ETHYL ALCOHOL
PART No.:	RM099
APPLICATIONS:	The scope of this SDS is applicable to ethyl alcohol 90 - 100%.
SUPPLIER:	J M Loveridge plc Southbrook Road, Southampton Hampshire SO15 1BH Tel: 023 8022 2008 Fax: 023 8022 2117

2 . COMPOSITION/INFORMATION ON INGREDIENTS:

EU INDEX No.:	603-002-00-5
EEC (EINECS) No.	200-578-6
CAS No.:	64-17-5

3 HAZARDS IDENTIFICATION:

Highly flammable.

4 . FIRST AID MEASURES:

GENERAL:	IN ALL CASES OF DOUBT OR WHEN SYMPTOMS PERSIST, ALWAYS SEEK MEDICAL ATTENTION
INHALATION:	Move affected person to fresh air.If recovery not rapid, seek medical attention.
INGESTION:	DO NOT INDUCE VOMITING. In case of spontaneous vomiting, be sure that vomit can freely drain because of danger of suffocation. Only when conscious, rinse mouth with plenty of water and give plenty of water to drink - (approx 500ml). Keep patient at rest and obtain medical attention.
SKIN:	Remove contaminated clothing. Wash affected area with plenty of soap and water. If irritation persists, seek medical attention.
EYES:	Rinse immediately with copious amounts of water. If irritation or discomfort persists, seek medical attention.

5 . FIRE FIGHTING MEASURES:

EXTINGUISHING MEDIA: Alcohol resistant foam. Carbon dioxide (CO_2). Dry chemicals, sand, dolomite etc.
Halon.

SPECIAL FIRE FIGHTING PROCEDURES: Use gentle application of water spray to keep exposed containers cool or to dissipate vapour.

UNUSUAL FIRE & EXPLOSION HAZARDS: May explode when heated or when exposed to flames or sparks. Vapour may travel considerable distance to source of ignition and flash back.

HAZARDOUS COMBUSTION PRODUCTS: Burning will produce oxides of carbon.

PROTECTIVE MEASURES IN FIRE: Fire fighters should wear self-contained breathing apparatus.

6 . ACCIDENTAL RELEASE MEASURES:

PERSONAL PRECAUTION IN SPILL: Wear appropriate protective clothing. Eliminate all sources of ignition.

PRECAUTIONS TO PROTECT ENVIRONMENT: Prevent contamination of soil, drains and surface water.

SPILL CLEAN UP METHODS: Take-up spillage with absorbent, inert material and place in a suitable and closable labelled container for recovery or disposal. Wash the area clean with water and detergent, observing environmental requirements.
Absorb small quantities with paper towels or other inert material and allow to evaporate in safe place (fume hood/cupboard).

7. . HANDLING AND STORAGE:

USAGE PRECAUTIONS: HANDLING - Product should be used in accordance with good industrial principles for handling and storing of hazardous chemicals.
Spillages will create a fire hazard. Avoid vapour formation and ignition sources. Avoid inhalation of vapours. Ensure good ventilation and local exhaust extraction in work place. (engineering controls must be to explosion/flameproof standard).
Earth container and transfer equipment to eliminate accumulation of static charge.

STORAGE PRECAUTIONS: Store in a cool, dry, well ventilated place, in securely closed original container.
Flammable/combustible - Keep away from oxidising agents, heat and flames.

STORAGE CRITERIA: Flammable liquid storage.

8 . EXPOSURE CONTROLS AND PERSONAL PROTECTION:

INGREDIENT NAME:	CAS No.:	STD	LT EXP 8 Hrs	ST EXP 15 Min
ETHANOL	64-17-5	OES	1000 ppm	No std.

VENTILATION: Provide adequate general and local exhaust ventilation. Work in fume cupboard.

RESPIRATORS: For short periods of work, a suitable RPE fitted with a combination charcoal or organic vapour cartridge is recommended.

PROTECTIVE GLOVES: Use impervious gloves made of butyl rubber or PVC.

EYE PROTECTION: Approved chemical safety goggles or face protection.

OTHER PROTECTION:	Use engineering controls to reduce air contamination to permissible exposure level. Wear personal protective equipment appropriate to the quantity of material handled.
HYGIENIC WORK PRACTICES:	SKIN PROTECTION - apply barrier cream to hands and exposed skin.

9. PHYSICAL AND CHEMICAL PROPERTIES:

APPEARANCE: ODOUR/TASTE:	Clear colourless liquid. Characteristic, alcoholic odour.		
BOILING POINT (°C, interval):	~ 78	**Pressure:**	
MELT./FREEZ. POINT (°C, interval):	~ -113		
DENSITY/SPECIFIC GRAVITY (g/ml):	~ 0.79	**Temperature (°C):**	20
VAPOUR DENSITY (air=1):	1.59		
VAPOUR PRESSURE:	5.81 kPa	**Temperature (°C):**	20
EVAPORATION RATE:	3.4	**Reference:**	BuAc=1
VOLATILE BY VOL. (%):	100		
SOLUBILITY DESCRIPTION:	Miscible with water. Soluble in:	Organic solvents (most).	
FLASH POINT (°C):	~ 13	**Method:**	CC (Closed cup).
AUTO IGNITION TEMP. (°C):	~ 365		
FLAMMABILITY LIMIT - LOWER (%):	3.3		
FLAMMABILITY LIMIT - UPPER (%):	19		

10. STABILITY AND REACTIVITY:

STABILITY:	Stable under normal conditions of use.
CONDITIONS TO AVOID:	Avoid heat, flames and other sources of ignition. Avoid accumulation of static electricity.
MATERIALS TO AVOID:	Oxidising agents. Sulphuric acid, Nitric acid.
HAZARDOUS DECOMP. PRODUCTS:	Thermal decomposition or burning will release oxides of carbon.

11. TOXICOLOGICAL INFORMATION:

TOXIC DOSE - LD50:	7060 mg/kg (oral rat)
HEALTH HAZARDS, GENERAL:	Intoxicating if inhaled or ingested.
INHALATION:	May cause transient irritation to the respiratory system. Exposure to high vapour concentration may cause central nervous system depression or systemic effects similar to those of ingestion.
INGESTION:	May cause nausea, vomiting, dizziness and depression of CNS. Aspiration during swallowing or vomiting may severely damage the lungs.
SKIN:	Repeated or prolonged contact may cause mild irritation and/or drying (defatting) of skin.

EYES: May cause transient eye irritation or damage.

OTHER HEALTH EFFECTS: Adverse effects on male reproductive system have been reported in laboratory animals on prolonged exposure.
Inconsistent mutagenic activity has been reported.

ROUTE OF ENTRY: Inhalation.

12. ECOLOGICAL INFORMATION:

Ecotoxicological data LC50 24 hours fish (trout) 11400 mg/l

ECOLOGICAL INFORMATION: Regarded as having low toxicity to aquatic organisms.

MOBILITY: Water soluble, will partition to aqueous phase. Lost within short period through evaporation and dissolution. Poorly absorbed onto soils or sediments.

BIO ACCUMULATION: Low bioaccumulation potential.

DEGRADABILITY: Readily biodegradable. - BOD5 = 37.74% of ThOD; BOD20 = 75-84% of ThOD.

13. DISPOSAL CONSIDERATIONS:

DISPOSAL METHODS: This material and/or its container must be disposed of as hazardous waste according to Special Waste Regulations 1996 or according to local regulations, in compliance with Duty of Care Regulations and Special Waste Regulations.

WASTE CLASS: WASTE CODE:0705** HAZARDOUS PROPERTY: H3-A

14. TRANSPORT INFORMATION:

LABEL FOR CONVEYANCE:

UN No. ROAD: 1170

ADR CLASS No.: 3

ADR CLASS: Class 3: Flammable liquids.

ADR ITEM No.: 3°(b)

HAZARD No. (ADR): 33 Highly flammable liquid (flash-point below 23°C).

ADR MARGINAL: 2301

ADR LABEL No.: 3

HAZCHEM CODE:	2YE
PROPER SHIPPING NAME I:	ETHANOL
ROAD TRANSPORT NOTES:	Flash point: 13°C
UN No. SEA:	UN 1170
IMDG CLASS:	3.2
IMDG PAGE No.:	3219
IMDG PACK GR.:	II
MARINE POLLUTANT:	No.
UN No., AIR:	UN-ID 1170
ICAO CLASS:	3
AIR PACK GR.:	II

15. REGULATORY INFORMATION:

LABEL FOR SUPPLY:

RISK PHRASES:	R-11 Highly flammable.
SAFETY PHRASES:	S-7 Keep container tightly closed. S-16 Keep away from sources of ignition - No Smoking.
UK REGULATORY REFERENCES:	Classification, Packaging and Labelling Regulations 1984. Chemicals (Hazard Information & Packaging) Regulations 1993.

16. OTHER INFORMATION:

INFORMATION SOURCES:	This product has been classified in accordance with CHIP3 regulations.
REVISION COMMENTS:	Edition 01; Revised item(s):
ISSUED BY:	MK
SDS No.:	181/183
DATE:	12/07/02
DISCLAIMER:	The foregoing data has been compiled for safety information only and does not form part of any selling specification. Information contained in this Data Sheet is to the best of JMLs knowledge correct at the time of publication. Customers should always satisfy themselves, that the product which they have selected is entirely suitable for their purpose under their conditions of use and in compliance with current regulations. For any further information, please contact the supplier.

MATERIAL SAFETY DATA SHEET

1 . IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND THE COMPANY:

PRODUCT NAME:	GLYCEROL
CHEMICAL NAME 2:	1,2,3-PROPANETRIOL
PART No.:	RM116, RM117
SYNONYMS, TRADE NAMES:	GLYCERINE
SUPPLIER:	J M Loveridge plc Southbrook Road, Southampton Hampshire SO15 1BH Tel: 023 8022 2008 Fax: 023 8022 2117

2 . COMPOSITION/INFORMATION ON INGREDIENTS:

EEC (EINECS) No.	200-289-5
CAS No.:	56-81-5

3 HAZARDS IDENTIFICATION:

Not regarded as a health or environmental hazard under current legislation.

4 . FIRST AID MEASURES:

GENERAL:	IN ALL CASES OF DOUBT OR WHEN SYMPTOMS PERSIST, ALWAYS SEEK MEDICAL ATTENTION
INHALATION:	Move affected person fromexposure. High vapour concentration unlikely owing to physical properties.Avoid inhalation of mist.
INGESTION:	Only when conscious rinse mouth out. Obtain medical attention if adverse symptoms occur.
SKIN:	Wash affected area with plenty of soap and water.
EYES:	Rinse immediately with copious amounts of water. If irritation or discomfort persists, seek medical attention.

5 . FIRE FIGHTING MEASURES:

EXTINGUISHING MEDIA:	Foam, dry chemical or carbon dioxide. Keep containers and surroundings cool with water spray.
SPECIAL FIRE FIGHTING PROCEDURES:	UNSUITABLE EXTINGUISHING MEDIA - high pressure water-jet. Burning will produce oxides of
HAZARDOUS COMBUSTION PRODUCTS:	carbon.

6. ACCIDENTAL RELEASE MEASURES:

PERSONAL PRECAUTION IN SPILL:	Wear appropriate protective clothing. Spillage may constitute a slipping hazard.
PRECAUTIONS TO PROTECT ENVIRONMENT:	Prevent contamination of soil, drains and surface water.
SPILL CLEANUP METHODS:	Take-up spillage with absorbent, inert material and place in a suitable and closable labelled container for recovery or disposal. Wash the area clean with water and detergent, observing environmental requirements.

7. HANDLING AND STORAGE:

USAGE PRECAUTIONS:	The product should be used in accordance with good industrial safety practice and hygiene principles for handling and storing of chemicals.
STORAGE PRECAUTIONS:	Store in a cool dry place. Store away from sources of heat or ignition.
STORAGE CRITERIA:	Securely sealed in original container.

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION:

INGREDIENT NAME:	CAS No.:	STD	LT EXP 8 Hrs	ST EXP 15 Min
GLYCEROL	56-81-5	OES	10 mg/m3	

INGREDIENT COMMENTS:	Refer to the current edition of HSE Guidance Note EH 40/200* for occupational exposure limits; - listed as glycerol, mist
RESPIRATORS:	No special respiratory equipment is required under normal conditions of use with adequate ventilation. Use of respiratory protective equipment is recommended where there is risk of high vapour or mist concentration.
EYE PROTECTION:	Use eye protection if eye contact is likely.
OTHER PROTECTION:	Wear personal protective equipment appropriate to the quantity of material handled.
HYGIENIC WORK PRACTICES:	Apply good personnal hygiene principles, such as washing of hands, arms and face.

9. PHYSICAL AND CHEMICAL PROPERTIES:

APPEARANCE:	Viscous colourless liquid.		
PHYSICAL DATA COMMENTS:	Combustible substance.		
DENSITY/SPECIFIC GRAVITY (g/ml):	1.26	**Temperature (°C):**	20
VAPOUR DENSITY (air=1):	3.17		

VAPOUR PRESSURE:	< 0.01 hPa	**Temperature (°C):**	20
pH-VALUE, CONC. SOLUTION:	7		
SOLUBILITY DESCRIPTION:	Miscible with water in all proportions.		
FLASH POINT (°C):	~ 175 °C	**Method:**	OC (Open cup).
AUTO IGNITION TEMP. (°C):	370		

10 . STABILITY AND REACTIVITY:

STABILITY:	Stable under normal conditions of use.
CONDITIONS TO AVOID:	Avoid excessive heat.
MATERIALS TO AVOID:	Oxidising agents. Mineral acids, Calcium hypochlorite, Acetic anhydride.
HAZARDOUS DECOMP. PRODUCTS:	Thermal decomposition or burning will release oxides of carbon.

11 . TOXICOLOGICAL INFORMATION:

TOXIC DOSE - LD 50:	25000 mg/kg (oral rat)
HEALTH HAZARDS, GENERAL:	No specific health effects anticipated with this product.

12 . ECOLOGICAL INFORMATION:

LC 50, 96 HRS, FISH mg/l:	> 1000mg/l
DEGRADABILITY:	Readily biodegradable.

13 . DISPOSAL CONSIDERATIONS:

DISPOSAL METHODS:	Disposal should be in accordance with the principles of Duty of Care observing local and national regulations.

14 . TRANSPORT INFORMATION:

GENERAL:	Not classified as hazardous for transport.

15 . REGULATORY INFORMATION:

UK REGULATORY REFERENCES:	This product is not classed as dangerous substance under the classification, packaging and labelling of dangerous substances regulations.

16. OTHER INFORMATION:

INFORMATION SOURCES:	This product has been classified in accordance with CHIP3 regulations.
REVISION COMMENTS:	Edition 01; Revised item(s):
ISSUED BY:	MK
SDS No.:	219
DATE:	12/07/02
DISCLAIMER:	The foregoing data has been compiled for safety information only and does not form part of any selling specification. Information contained in this Data Sheet is to the best of JMLs knowledge correct at the time of publication. Customers should always satisfy themselves, that the product which they have selected is entirely suitable for their purpose under their conditions of use and in compliance with current regulations. For any further information, please contact the supplier.

MATERIAL SAFETY DATA SHEET

MONOPROPYLENE GLYCOL USP/EP

Material Group: 102700 **AUGUST 2013**

Test	Specification	Method
Assay (%)	Min 99.80	Current USP
Acidity (ml)	Max 0.20	Current USP
Chlorides (ppm)	Max 70	Current USP
Heavy metals (ppm)	Max 5.0	Current USP
Residue on ignition per 50g (mg)	Max 3.50	Current USP
Specific Gravity @ 25°C	1.035 – 1.037	Current USP
Sulphate (ppm)	Max 60	Current USP
Water Content (%)	Max 0.2	Current USP
ID Test A, matches IR scan	Pass	Current USP
ID Test B, Limit of Ethylene Glycol	Pass	Current USP
ID Test B, Limit of Diethylene Glycol	Pass	Current USP
ID Test C, Matches GC Scan	Pass	Current USP
Acidity (ml)	Max 0.05	Current EP
Boiling Point (°C)	184 – 189	Current EP
Clarity	Pass	Current EP
Colour	Pass	Current EP
Heavy Metals (ppm)	Max 5.0	Current EP
Melting Point (°C)	121 – 128	Current EP
Oxidising substances, 0.05M Sodium thiosulphate (ml)	Max 0.20	Current EP
Reducing substances	Pass	Current EP
Refractive Index @ 20°C	1.431 – 1.433	Current EP
Relative density @ 20°C	1.035 – 1.040	Current EP
Sulphated Ash (%)	Max 0.0100	Current EP
Water Content (%)	Max 0.2	Current EP
Assay (%)	Min 99.80	Current FCC
Acidity	Pass	Current FCC
Appearance, clear & colourless	Pass	Current FCC
Distillation, IBP (°C)	Min 185.0	Current FCC
Distillation, DP (°C)	Max 189.0	Current FCC

Lead (Pb) (ppm)	Max 1.0	Current FCC
Identification, matches IR scan	Pass	Current FCC
Residue on ignition (%)	Max 0.0070	Current FCC
Specific gravity @ 25 °C	1.035 – 1.037	Current FCC
Water content (%)	Max 0.2	Current FCC
Acidity	Pass	Current JP
Arsenic (ppm)	Max 2.0	Current JP
Chlorides (%)	Max 0.007	Current JP
Distilling range, 184 - 189°C (%vol)	Min 95	Current JP
Glycerine (Odour)	Pass	Current JP
Heavy metals (ppm)	Max 5.0	Current JP
Melting Point (°C)	174 – 178	Current JP
Odour	Pass	Current JP
Residue on ignition (%)	Max 0.0050	Current JP
Specific gravity @ 20°C	1.035 – 1.040	Current JP
Sulphate (%)	Max 0.002	Current JP
Water Content (%)	Max 0.5	Current JP
Acidity as acetic acid (%)	Max 0.0020	Supplier
Appearance, clear, free of suspended matter	Pass	Visual
Chlorides (ppm)	Max 1.0	Supplier
Colour (Pt-Co)	Max 10	ASTM D5386
Dimer, Trimer & High Polymers (%)	Max 0.100	Supplier
Ethylene Glycol (%)	Max 0.0080	Supplier
Diethylene Glycol (%)	Max 0.0080	Supplier
Iron (ppm)	Max 0.30	ASTM E202
Odour, practically odourless	Pass	Supplier
Specific Gravity @20°C	1.0376 – 1.0389	ASTM D4052

General Notes
Values reported for Assay, Ethylene glycol and Diethylene glycol under USP and for Assay under FCC are obtained using the validated Dow GC method (DOWM 100687)

Regulation (EU) No 231/2012: Distillation range of 185 - 189°C is covered by current FCC; Purity of 99.5% is covered by GC analysis (DOWM 100687)

Revision 00

Polysorbate 20

Safety Data Sheet (SDS)

Section 1: Identification of Product

Product Name: Polysorbate 20
Product Number: 5060233382088

Section 2: Hazards indentification

2.1 Classification of the substance or mixture

2.1.1 Regulation (EC) No. 1272/2008 (CLP): Skin Sens. 1 H317

2.1.2 Directive 1999/45/EC: Warning

2.2 Label elements: According to EC 1272/2008:

2.2.1 Label elements

GHS Product Identifier: Polysorbate 20

Signal word(s): Warning

Hazard statement(s): H317: May cause an allergic skin reaction.

Precautionary statement(s): Not Available

2.2.2 Label elements: Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard classification: Not Applicable

2.3 Other hazards: Not applicable

2.4 Additional Information: None

Section 3: Composition and information on Ingredients

Inci: Polysorbate 20
Cas: 9005-64-5
Einecs: 500-018-3

3.1 Substances

EC Classiciation No. 1272/2008

Hazourdous ingredient(s)	%W/W	Cas No.	EC No.	Hazard Statement

Ethoxylated sorbitan monostearate	100	9005-64-5	500-018-3	H317

EC Classiciation No. 67/548/EEC

Hazourdous ingredient(s)	%W/W	Cas No.	EC No.	Hazard Statement
Ethoxylated sorbitan monostearate	100	9005-64-5	500-018-3	H317

Section 4: First aid measures

Inhalation: Unlikely route of exposure. Remove persons affected by vapour to fresh air. Apply artificial respiration if breathing has ceased or shows signs of failing. Administer oxygen if necessary. If symptoms develop, obtain medical attention.

Skin Contact: Remove contaminated clothing and wash affected skin with plenty of water.Wash contaminated clothing before reuse. If symptoms develop, obtain medical attention.

Eye Contact: Obtain medical attention. If substance has got into the eyes, immediately wash out with plenty of water for at least 10 minutes.

Ingestion: Obtain medical attention. Provided the patient is conscious, wash out mouth with water and give 200-300 ml (half a pint) of water to drink. Do not induce vomiting.

4.2 Most important symptoms and effects, both acute and delayed: No additional Information available

4.3 Indiciation of the immediate medical attention and special treatment needed: No information available

Section 5: Fire - Fighting measures

5.1 Extinguishing media

Suitable Extinguishing Media Carbon dioxide (CO2), dry chemical powder, foam.te for surrounding fire.

Unsuitable Extinguishing Media Do not use a solid water stream as it may scatter and spread fire.

5.2 Special hazards arising from the substance or mixture: None known

5.3 Advice for fire-fighters: Self-contained breathing apparatus to be worn if involved in fire.

Section 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures: Put on protective clothing. Avoid contact with skin and eyes.

6.2 Environmental precautions: Do not allow to enter drains, sewers or watercourses.

6.3 Methods and material for containment and cleaning up: Adsorb spillages onto sand, earth or any suitable adsorbent

6.4 Reference to other sections: No additional information available material. Transfer to a container for disposal.

Section 7: Handling and Storage

7.1 Precautions for safe handling: General hygiene measures for the handling of chemicals are applicable. Avoid contact with skin and eyes. Use only in well-ventilated areas.

7.2 Conditions for safe storage, including any incompatibilities: Keep only in the original container in a cool, well-ventilated place. Keep containers properly sealed when not in use.

Storage Temperature Maximum: 40 degC.

Storage Life: One year.

Incompatible materials: Strong oxidising and reducing agents.

Other information: Keep away from direct sunlight.

Section 8: Exposure controls and personal protection

8.1 Control parameters: No additional information available

8.1.1 Occupational Exposure Limits: WEL: Workplace Exposure Limit (UK HSE EH40)

LTEL (8 hr TWA mg/m³): No additional information available

LTEL (8 hr TWA mg/m³)

8.2 Exposure controls

8.2.1 Appropriate engineering controls: Provide adequate ventilation, especially in confined areas

8.2.2 Personal protection equipment

 **Eye/face protection**	Safety spectacles/goggles. Minimum standard EN166
 **Hand Protection**	Nitrile gloves Minimum standard EN374-3. Apron or other light protective clothing.

 **Respiratory Protection**	Provide adequate ventilation, including appropriate local extraction. Personal respiratory equipment is not normally required.
Other	Guarantee that the eye flushing systems and safety showers are located close to the working place. Do not eat, drink or smoke when using this product. Wash hands before breaks and after work.

Environmental Exposure Controls: Do not allow to enter drains, sewers or watercourses.

Section 9: Physical data and chemical properties

9.1 Information on basic physical and chemical properties (Solution)

Appearance: Liquid

Colour: Pale yellow to amber

Odour: Almost odourless

Odour Threshold (ppm): Not available

pH (Value)(5 % solution in water at 20 degC): 5.00 – 6.50

Melting Point (°C) / Freezing Point (°C): ~ 15.00

Boiling point/boiling range (°C): ~ >200.00

Flash Point (°C) [Closed cup]: >100.00

Solubility (Water): Soluble

Solubility (Other): Not available

Section 10: Stability & Reactivity

10.1 Reactivity

Reacts with Strong oxidising agents and acids

10.2 Chemical stability

Stable under normal conditions.

10.3 Possibility of hazardous reactions

None known

10.4 Conditions to avoid

High temperatures

10.5 Incompatible materials

Strong oxidising agents. Strong acids

10.6 Hazardous Decomposition Product(s)

None known

Section 11: Toxicological Information

11.1 Information on toxicological effects

11.1.1 Substances

Acute toxicity

Ingestion: LD50 > 5 000 mg/kg (rat)(Cetyl alcohol) / LD50 > 2 000 mg/kg (rat)(Stearyl alcohol)

Inhalation (4 hrs): Not available

Skin Contact: LD50**:** 3 200 mg/kg (rat)(Cetyl alcohol)

Skin corrosion/irritation: Not irritant.

Serious eye damage/irritation: Slightly irritant.

Respiratory or skin sensitization: It is not a skin sensitiser in animal tests.

Mutagenicity: There is no evidence of mutagenic potential.

Carcinogenicity: No evidence of carcinogenicity.

Reproductive toxicity: No evidence of reproductive toxicity.

STOT-single exposure

Inhalation : Irritation of the respiratory tract. Coughing.

Ingestion : Inflammation of digestive tract

STOT-repeated exposure (91 days)

No data

Section 12: Ecological information

12.1 Toxicity

(Fish) (96hrs): NOEC> 0.4mg/l (> limit of solubility)(Stearyl alcohol)

(Daphnia magna) (48hrs): EC50 > 0.01 mg/L (> limit of solubility)(Cetyl alcohol)

(Algae) (72hrs): EC50 > 0.01 mg/l (> limit of solubility)(Cetyl alcohol)

12.2 Persistence and degradability

Readily biodegradable.

12.3 Bioaccumulative potential (96 hrs)

The product has moderate potential for bioaccumulation.

12.4 Mobility in soil

This product is predicted to degrade in soil.

12.5 Results of PBT and vPvB assessment

Not classified as PBT or vPvB.

12.6 Other adverse effects

None recorded

Section 13: Disposal considerations

13.1 Waste treatment methods

Material to be disposed of as hazardous waste. Normal disposal is via incineration operated by an accredited disposal contractor. Consult an accredited waste disposal contractor or the local authority for advice.

13.2 Additional Information

None

Section 14: Transport information

14.1 Land transport (ADR/RID)

UN number: Not classified according to the United Nations 'Recommendations on the Transport of Dangerous Goods'.

14.2 Sea transport (IMDG)

UN number: Not classified according to the United Nations 'Recommendations on the Transport of Dangerous Goods'.

14.3 Air transport (ICAO/IATA)

UN number: Not classified according to the United Nations 'Recommendations on the Transport of Dangerous Goods'.

Section 15: Regulatory information

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

15.1.1 EU regulations: Authorisations and/or restrictions on use None anticipated

15.1.2 National regulations: None assigned

15.2 Chemical Safety Assessment: No Chemical Safety Assessment (CSA) has been carried out

Section 16: Other information

The following sections contain revisions or new statements: Sections #1 - #16.

European Chemicals Agency

European Chemicals Bureau

European Regulations and Directives

Published chemical directories

Suppliers' safety data sheets

UK Health and Safety Executive

US Environmental Protection Agency

Hazard statement(s):

H317: May cause an allergic skin reaction.

Basis of Classification:

Calculation method

To the best of our knowledge, the information contained in the sheet is correct. However, we cannot accept responsibility for any consequences from its use.

MATERIAL SAFETY DATA SHEET

Safety Data Sheet for all grades of Vacuum Salt (Sodium Chloride) (also applicable to all grades of compacted products)

1.1 Identification of the Substance

Chemical Name	:	Sodium Chloride
Synonyms	:	Halite
Formula	:	NaCl
CAS Number	:	7647-14-5
EINECS Number	:	231-598-3
Chemical Family	:	Inorganic Salt

1.2 Identification of the Company - As on letterhead

1.3 Emergency Telephone & Responsible Person

:	01606-832881	(Office Hours)
:	01606-839241	(Out of Hours)
:	Mike Coulson	(SHE Director)
	mcoulson@british-salt.co.uk	

2. Hazard Identification

Inhalation:	Very high concentrations of salt dust may result in inflammations of the mucus membranes of the respiratory tract.
Skin Contact:	Dry salt and concentrated solutions can cause withdrawal of fluid from the skin and may, on prolonged contact, produce irritation.
Eye Contact:	Salt and salt solutions are not toxic to the eye but concentrations much above that of tears cause a stinging sensation.

Ingestion:	Acute and chronic toxic effects can result from the ingestion of excessive amounts of either salt or brine. Salt should not be used as an emetic to induce vomiting. High concentrations produce inflammatory reactions in the gastrointestinal tract and can cause vomiting, diarrhoea, convulsions and collapse. The ingestion of hypertonic solutions can cause fatal disturbance of body electrolyte and fluid balance particularly in the young and elderly. Less than a tablespoon of salt may severely poison an infant and sometimes prove fatal.

3. Composition

Sodium Chloride 99.9% minimum on dry basis.
Composition by weight is 39.4% sodium and 60.6% chlorine.
It is treated with part per million levels of a non-toxic anti-caking additive, sodium hexacyanoferrate(II) - E535.

4. First Aid Measures:

Inhalation:	Remove patient to fresh air. Keep warm and at rest. Give drinks if desired.
Ingestion:	Vomiting will probably occur. Provided the patient is conscious. Give plenty of liquid to drink. Obtain immediate medical attention especially if vomiting has not occurred.
Eye Contact:	Irrigate with eyewash solution or water. If symptoms develop. Obtain medical help.
Skin Contact:	Wash with plenty of water.

5. Fire Fighting Measures:

Flammability:	Non-flammable
Extinguishants:	Use agents suitable for type of surrounding fire (dry chemical, CO_2, water spray or foam).
Special Hazards:	Salt withstands temperatures up to its melting point and beyond without decomposing, but at very high temperatures (greater than approximately 800°C) a vapour may be emitted which is particularly irritating to the eyes.
Protective Equipment:	As applicable to the combustion products associated with the fire.

6. Accidental Release Measures

Personal Precautions: Avoid prolonged contact with the skin and inhalation of dust concentrations, otherwise normal good handling and housekeeping practice is adequate. No special protective clothing is required. An eyewash bottle with clean water should be available.

Spillages: Spillages should be swept up or may be safely water hosed to drain under normal circumstances.

7. Handling and Storage

Handling: Salt dust is non-flammable but static electricity can be generated by pneumatic conveying, therefore pipes should be bonded and earthed, especially in environments where a spark could prove hazardous.

Storage: Due to its hygroscopic nature, dried vacuum salt should be stored in a dry atmosphere and away from concentrated acids. Absorbs moisture if the relative humidity is greater than 75%.

8.1 Exposure Controls

Occupational Exposure Limits: (UKEH40)
as total dust 10mg/m^3 (8hr TWA)
as respirable dust 4mg/m^3 (8hr TWA)

Dangerous Exposure: None specified.

Engineering Controls: Static electricity can be generated by pneumatic conveying; therefore pipes should be bonded and earthed, especially in environments where a spark could prove hazardous.

8.2 Personal Protection:

Respiratory Protection: If the process is such that salt dust is generated, a disposable face mask should be worn.

Hand Protection: Gloves to be worn if prolonged contact is anticipated. Dry salt and concentrated solutions can cause withdrawal of fluid from the skin.

Eye Protection: Wear chemical safety goggles in situations where contact with the eyes may occur.

Skin Protection: Skin should be washed to remove salt. Dry salt and concentrated solutions can cause withdrawal of fluid from the skin.

Other Protective Measures: An eyewash and hand washing facilities should be readily available.

9. Physical and Chemical Properties.

Appearance	:	Crystalline solid
Colour	:	White / Colourless
pH	:	10.0 approx. (10% solution)
Boiling Point	:	1413°C
Melting Point	:	802°C
Flammability	:	Non-flammable
Flash Point	:	Non-flammable
Explosive Properties	:	Non-flammable
Oxidising Properties	:	Non-flammable Vapour
Pressure	:	2.4mm Hg at 747°C
Density	:	2.165 g cm^{-3} (of crystalline solid at 20°C) Water
Solubility	:	35.9 g/100g at 0°C ; 39.2 g/100g at 100°C Viscosity
	:	Not applicable
Vapour Density	:	Not applicable

10. Stability and Reactivity

Chemical Stability: Stable

(a) Conditions to avoid: Reacts with strong sulphuric acid or nitric acid to give hydrogen chloride gas.

(b) Materialtoavoid: Under wet conditions can corrode many common metals, particularly iron, aluminium and zinc. Stainless steel and Monel resist attack. Does not react with alkalis at ordinary temperatures.

(c) Thermal Decomposition Products: Trace amounts of hydrogen chloride gas may be evolved at temperatures in excess of 800°C. Contains no water of crystallisation.

(d) Flammability Not flammable

(e) Ignition sensitivity Not applicable

(f) Explosive severity Not explosive. Static electricity can be generated by pneumatic conveying; therefore pipes should be bonded and earthed, especially in environments where a spark could prove hazardous.

11. Toxicological Information

Eyes: Dust may be irritating

Skin: Irritation after prolonged contact

Ingestion: Salt is an essential constituent of the diet. It provides important body electrolytes and is the source of hydrochloric acid present in the gastric juices. The blood stream contains nearly 1% sodium chloride. In normal industrial use salt is Non-hazardous. LD50 3000mg/kg oral, rat.

Inhalation: Dustsmaybeirritating. Carcinogenicity:

Not considered to be a carcinogen.

Mutagenicity: Not considered to be a mutagen.

Reproductive Effects: None identified

12. Ecological Information
A maximum value of 412 mg/l ensures the protection of all aquatic life. Source: Water Research Centre - September 1990

96 hour	LC50 (Fish)	6750 mg/l
48 hour	EC 50 (Daphnia)	2024 mg/l
72 hour	IC 50 (Algae)	3014 mg/l
Daphnia Subacute		1062 mg/l
Fish Subacute		433 mg/l
BOD 5 Day		0 mg/l
COD		0mg/l
Earthworm Toxicity		1000 hg/cm^2

13. Disposal Considerations

Disposal should be in accordance with local or national regulations.

14. Transport Information

Material not included in the "List of Substances Dangerous for Supply"

Material not included in the "List of Substances Dangerous for Conveyance by Road"

15. Regulatory Information User:
Not classified as hazardous to users.

EEC Classification:
Under the Classification, Packaging and Labelling of Dangerous Substances Regulations, 1984, this material is not dangerous for supply or conveyance.

16. OtherInformation(none)

Last reviewed June 2009

MATERIAL SAFETY DATA SHEET

1.	**Product Identification**	**Sterile Water**
2.	**Hazards Identification:**	**Emergency Overview:** Health injuries are not known or expected under normal use. **OSHA Regulatory Status:** Please see details below. **Potential Health Effects Routes of Exposure:** None **Eyes:** None **Skin:** None **Inhalation:** None **Ingestion:** None **Potential environmental effects:** Ecological injuries are not known or expected under normal use.
3.	**Composition / Information on Ingredients:**	Water for Injection
4.	**First Aid Measures:**	**First Aid Procedures** **Eye Contact:** None **Skin Contact:** None **Inhalation:** None **Ingestion:** None **General Advice:** If you feel unwell, seek medical advice (show label when possible).
5.	**Fire Fighting Measures:**	**Flammable Properties:** This product is not flammable. No unusual fire or explosion hazards noted. **Extinguishing Media:** N/A **Protection of Firefighters** **Specific Hazards Arising from the Chemical:** N/A **Protective Equipment and Precautions for Firefighters:** N/A **Specific Methods:** N/A
6.	**Accidental Release Measures:**	**Personnel Precautions:** N/A **Environmental Precautions:** N/A **Methods for containment:** N/A **Methods for Cleaning Up:** N/A
7.	**Handling and Storage:**	**Handling:** Handle in accordance with good industrial hygiene and safety practice. **Storage:** Store in tightly closed containers in a dry cool place per label directions.
8.	**Exposure Controls / Personal Protection:**	**Engineering Controls:** Provide adequate ventilation **Personal Protective Equipment Eye / Face Protection:** None **Skin Protection:** None **Respiratory Protection:** Not required for normal use of this material. **General Hygiene Considerations:** Handle in accordance with good industrial hygiene and safety practice.

9. Physical and Chemical Properties:	**Appearance:**	Liquid
	Physical State:	Liquid
	Form:	Aqueous Solution
	Color Light:	Clear, Colorless
	Odor:	None
	Boiling Point:	100°C
	Flash Point:	N/A
	Flammability:	Non-flammable
	Vapor Pressure:	N/A
	Density:	No Data Available
	Solubility (Water):	N/A
	Viscosity:	No Data Available
	Vapor Density:	N/A
	Evaporation Rate:	No Data Available
	Melting Point:	N/A
	Freezing Point:	No Data Available
	Burning Index:	No Data Available

10. Chemical Stability and Reactivity Information:	**Chemical Stability:** Material is stable under normal conditions.
	Hazardous Decomposition Products: Not known.
	Possibility of hazardous reactions: Not expected to occur.

11. Toxicological Information:	**Toxicological Data**	
	Product:	Sterile Water for Injection
	Sensitization:	No Data Available
	Chronic Effects:	No Data Available
	Carcinogenicity:	No Data Available
	Skin Corrosion / Irritation:	No Data Available
	Epidemiology:	No Data Available
	Mutagenicity:	No Data Available
	Neurological Effects:	No Data Available
	Reproductive Effects:	No Data Available
	Teratogenicity:	No Data Available
	Further Information:	No Data Available

12. Ecological Information:	**Ecotoxicological Data**
	Components: No Data Available **Test Results:** No Data Available
	Ecotoxicity: No Data Available
	Environmental Effects: No Data Available
	Persistence and Degradability: No Data Available

13. Disposal Considerations:	**Disposal Instructions:** According to Federal regulations (40CFR 261.4 (b) (4)), it is the responsibility of the user of the product to determine, at the time of disposal, whether the product meets RCRA criteria for hazardous waste. Disposal should be in accordance with all applicable regulations.

14.	**Transport Information:**	**DOT:** Not regulated as dangerous goods.

15.	**Regulatory Information:**	**US Federal Regulations:** This product is not known to be a "Hazardous Chemical" as defined by the OHSA Hazard Communication Standard, 29 CFR 1910.1200. All components are on the US EPA TSCA Inventory List. **CERCLA/SARA Hazardous Substances:** Not applicable. **CERCLA (Superfund) Reportable Quantity:** None. **Superfund Amendments and Reauthorization Act of 1986 (SARA)** Hazard Categories Immediate Hazard – No Delayed Hazard – No Fire Hazard – No Pressure Hazard – No Reactivity Hazard – No **Section 302 Extremely Hazardous Substance:** No **Section 311 Hazardous Chemical:** No

16. Other Information:

Prepared By: Nova-Tech, Inc. – Tel: 308-381-8841

Date: 23 SEP 12

Disclaimer:

The information provided on 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 guide for safe handling, use, processing, storage, transportation, disposal, and release. It is not to be considered as 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 material or in any process, unless specified in the text.

End of SDS

TRIETHANOLAMINE AQUEOUS

MATERIAL SAFETY DATA SHEET

Product name

TRIETHANOLAMINE AQUEOUS

Conforms to 93/112/EC and ISO 11014-1 - United Kingdom (UK)

1.

EMERGENCY ONLY
TELEPHONE NUMBER
:
Chemical product name TRIETHANOLAMINE
TRIETHANOLAMINE AQUEOUS
2-HYDROXYETHYLAMINE
Synonyms

MTEA080

Formula : $(HOCH_2CH_2)_3N$ **Molecular Mass :** 149.19

2. Composition/information on ingredients

Substance/Preparation Substance
*** Occupational Exposure Limit(s), if available, are listed in Section 8**
:
Chemical name* CAS No. % EC Number Symbol R-Phrases
1) TRIETHANOLAMINE 102-71-6 85-100 203-049-8
CONTAINS TRIETHANOLAMINE AT SPECIFIED MASS
CONCENTRATION.
Composition
CAS No. 102-71-6
EINECS Number 203-049-8

3. Hazards identification

Wash out mouth with water. Have victim drink 240-300ml of water to dilute stomach contents. Obtain medical
attention. Do not induce vomiting.
Skin contact
Immediately flood the eye with plenty of water for at least 15 minutes, holding the eye open. Immediately flood the skin with large quantities of water, preferably under a shower. Obtain medical attention if
bliste ring occurs or re dne ss pe rsists. Remove contaminate d clothing as washing proce e ds. Contaminate d clothing
should be washed or dry-cleaned before re-use.

4. First-aid measures

Hazardous in case of skin contact (irritant). Skin inflammation is characte rize d by itching, scaling, re dde ning, or,
occasionally, blistering.

Skin contact

Eye Contact Hazardous in case of eye contact (irritant).

First-Aid measures

Remove from exposure. Remove from exposure. Keep warm and at rest. If there is difficulty in breathing, give oxygen.
If breathing stops or shows signs of failing, give artificial respiration. Do not use mouth to mouth ventilation. Obtain
medical attention urgently.

Ingestion

Effects and symptoms

Inhalation

Eye Contact

5. Fire-fighting measures

Suitable

Fire fighters should wear self-contained positive pressure breathing apparatus (SCBA) and full turnout gear.

Hazardous thermal (de)composition
products

Unusual fire/explosion Hazards

This product may give rise to hazardous fumes in a fire. These may include: Ammonia, carbon oxides, nitrogen oxides.
Irritating vapours/gases may be formed.

Protection of fire-fighters Wear full protective clothing and self-contained breathing apparatus.

Special fire-fighting procedures

Sele ct e xtinguishing age nt appropriate to othe r mate rials involve d. Use wate r spray, foam, dry che mical or carbon
dioxide. Use water spray, fog or alcohol resistant foam.

Extinguishing Media:

Environmental precautions and
cleanup methods

Personal Precautions

Transfer into suitable containers for recovery or disposal. Drench spillage with water and wash to drain, diluting greatly
with water. Contain and absorb using earth, sand or other inert material.
Ventilate the area to dispel possible toxic decomposition fumes. Wear appropriate protective clothing.

6. Accidental release measures:

: Advise Authorities if spillage has entered water course or sewer or has contaminated soil or vegetation.

7. Handling and storage

Handling

Keep away from heat. Keep away from sources of ignition. Empty containers may still contain significant residual
amounts of the product. Ground all equipment containing material. Do not ingest. Do not breathe gas/fumes/vapour/spray. If ingested, seek medical advice immediately and show the container or the label.

Packaging materials

Use original container.

Storage

Storage area should be: cool. under cover. well ventilated. Store under a nitrogen blanket. Protect from high
temperatures, sunlight and freezing.

Recommended use

Engineering measures Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapours below their
respective threshold limit value. Ensure that eyewash stations and safety showers are close to the workstation
location.

Workplace Exposure Limits

8. Exposure controls/personal protection

Hygiene measures Wash hands after handling compounds and before eating, smoking, using lavatory, and at the end of day.

Skin and body

Personal protective equipment

Wear appropriate respirator when ventilation is inadequate.
Overalls or Lab coat.

Hands Chemical resistant gloves.

Eyes Chemical splash goggles.

Respiratory system

: Not available.

>270°C (518°F)

rties

Physical state

Melting point

Boiling point

Vapour pressure

Density

Vapour density

Solubility

Hygroscopic. Viscous liquid.

<14°C (57.2°F)

1.12 g/cm3 at 15°C (59°F)

5.3 (Air = 1)
<0.01 mbar at 40ºC
Completely soluble.
Odour Mild. Ammoniacal.
pH
Colour Colourless.
Autoignition temperature
Flash point
>175°C (347°F)
CLOSED CUP: >184°C (363.2°F).
LOWER: 3.6% UPPER: 7.2%

9. Physical and chemical properties

The product is more soluble in water; log(oil/water) = -2.3
Alkaline
Viscosity Dynamic: 600 mPa.s at 25ºC.
Octanol/water partition coefficient
Lower explosion limit:
Hazardous decomposition products

This product may give rise to hazardous fumes in a fire. These may include: Ammonia, carbon oxides, nitrogen oxides.
Irritating vapours/gases may be formed.
Stability The product is stable.

10. Stability and reactivity

Acids, oxidising agents, zinc, aluminium, copper, copper alloys, potassium, magnesium.
:
:
Materials to avoid :
Acute oral toxicity (LD50): 5000 to 9600 mg/kg [Rat].
Acute dermal toxicity (LD50): >2000 mg/kg [Rabbit].
May cause irritation of respiratory tract.

11. Toxicological information

Acute toxicity

Local effects
:
TRIETHANOLAMINE AQUEOUS

12. Ecological information

Ecotoxicity Ecotoxicity in water:
(LC50): 1800 to 11800 mg/l, 96 hours [Fish].
(EC50): 739 to 2038 mg/l, 24 hours [Daphnia].
Mobility Soluble in water.
Readily biodegradable
Not expected to bioaccumulate.

Persistence/degradability
Bioaccumulative potential
:
:
:
:

13. Disposal considerations

Methods of disposal ; Waste of residues ; Contaminated packaging
: Waste must be disposed of in accordance with federal, state and local environmental control regulations.
Waste Classification : Not applicable.

14. Transport information

International transport regulations
UN : UN number Not regulated.

15. Regulatory information

Risk Phrases This product is not classified according to the EU regulations.
EU Regulations
:
Product Use Classification and labe lling have be e n pe rforme d according to EU dire ctive s 67/548/EEC, 88/379/EEC, including
amendments and the intended use.
- Consumer applications.

16. Other information

30/03/2010.
HISTORY
Michael Hale / Alistair Hunter

Date of printing
Date of issue
Version
Prepared by
30/03/2010.
Version ***Page: 3/3***

To the best of our knowledge, the information contained herein is accurate. However, neither the above named supplier nor any of its subsidiaries
assumes any liability whatsoever for the accuracy or completeness of the information contained herein.
Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be
used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.
Notice to Reader
2.02
2.02
Date of previous issue 10/11/2009.
:

:Version 2: R36/38 removed from section 15.

Vitamin E (Tocopheryl Acetate)

MATERIAL SAFETY DATA SHEET

Section 1: Identification of Product and Supplier

Product Name: Vitamin E
Product Number: 5060233389674

Section 2: Hazards indentification

Potential Acute Health Effects:

Slightly hazardous in case of skin contact (irritant, permeator), of eye contact (irritant), of ingestion, of inhalation.

Potential Chronic Health Effects:

CARCINOGENIC EFFECTS: Not available. MUTAGENIC EFFECTS: Not available. TERATOGENIC EFFECTS: Not available. DEVELOPMENTAL TOXICITY: Not available. Repeated or prolonged exposure is not known to aggravate medical condition.

Section 3: Composition and information on Ingredients

Inci**: Tocopheryl acetate (Vitamin E)**
Cas**: 7695-91-2 / 58-95-7**
Einecs**: 231-710-0 / 200-405-4**

{D-alpha-}Tocopheryl Acetate 58-95-7 100 & by Weight

Section 4: First aid measures

Section 5: Fire - Fighting measures

Section 6: Accidental release measures

Section 7: Handling and Storage

Section 8: Exposure controls and personal protection

Section 9: Physical data and chemical properties

Section 10: Stability & Reactivity

Section 11: Toxicological Information

No toxicological data available

Section 12: Ecological information

Section 13: Disposal considerations

Section 14: Transport information

Section 15: Regulatory information

Section 16: Other information

To the best of our knowledge, the information contained in the sheet is correct. However, we cannot accept responsibility for any consequences from its use.