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| SAFETY DATA SHEET | | Revision Date: 11/07/2016 |
| | | Print Date: 4/21/2017 |
| | | SDS Number: R0718202 |
| Vincience / Cotton bloom™ 5S biofunctional ™ Trademark, Ashland or its subsidiaries, registered in various countries 827100 | | Version: 1.1 |

29 CFR 1910.1200 (OSHA HazCom 2012)

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product identifier

Trade name : Vincience / Cotton bloom™ 5S
biofunctional
™ Trademark, Ashland or its subsidiaries, registered in
various countries

Recommended use of the chemical and restrictions on use

| | |
|---|---|
| Details of the supplier of the safety data sheet Ashland P.O. Box 2219 Columbus, OH 43216 United States of America EHSProductSafety@ashland.com | Emergency telephone number 1-800-ASHLAND (1-800-274-5263) Regulatory Information Number 1-800-325-3751 Product Information 614-790-3333 |
|---|---|

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification

This material is not considered hazardous under the OSHA Hazard Communication Standard (HazCom 2012).

GHS Label element

This material is not considered hazardous under the OSHA Hazard Communication Standard (HazCom 2012).

Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Hazardous components

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| Chemical Name | CAS-No. | Classification | Concentration (%) |
|---------------|----------------|---------------------------------------|--------------------|
| ALCOHOL | 254504001-5838 | Not a hazardous substance or mixture. | >= 20.00 - < 30.00 |

The identity of one or more component(s) is being withheld under business confidentiality.

| | | | |
|---------|---------|---------------------------------------|------|
| SUCROSE | 57-50-1 | Not a hazardous substance or mixture. | 1.69 |
|---------|---------|---------------------------------------|------|

SECTION 4. FIRST AID MEASURES

| | |
|---|---|
| General advice | : No hazards which require special first aid measures. |
| If inhaled | : If breathed in, move person into fresh air. If unconscious place in recovery position and seek medical advice. If symptoms persist, call a physician. |
| In case of skin contact | : First aid is not normally required. However, it is recommended that exposed areas be cleaned by washing with soap and water. |
| In case of eye contact | : Remove contact lenses. Protect unharmed eye. |
| If swallowed | : Do not give milk or alcoholic beverages. Never give anything by mouth to an unconscious person. If symptoms persist, call a physician. |
| Most important symptoms and effects, both acute and delayed | : Signs and symptoms of exposure to this material through breathing, swallowing, and/or passage of the material through the skin may include: irritation (nose, throat, airways) |
| Notes to physician | : No hazards which require special first aid measures. |

SECTION 5. FIREFIGHTING MEASURES

| | |
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| Suitable extinguishing media | : Use extinguishing measures that are appropriate to local |
|------------------------------|--|



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circumstances and the surrounding environment.

Water spray

Foam

Carbon dioxide (CO₂)

Dry chemical

Specific hazards during
firefighting

: If product is heated above its flash point it will produce vapors sufficient to support combustion. Vapors are heavier than air and may travel along the ground and be ignited by heat, pilot lights, other flames and ignition sources at locations near the point of release.
Do not allow run-off from fire fighting to enter drains or water courses.

Hazardous combustion
products

: Aldehydes
carbon dioxide and carbon monoxide
nitrogen oxides (NO_x)
Hydrocarbons

Specific extinguishing
methods

:

Product is compatible with standard fire-fighting agents.

Further information

: Standard procedure for chemical fires.

Special protective equipment
for firefighters

: In the event of fire, wear self-contained breathing apparatus.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions,
protective equipment and
emergency procedures

: Persons not wearing protective equipment should be excluded from area of spill until clean-up has been completed.

Environmental precautions

: Prevent further leakage or spillage if safe to do so.

Methods and materials for
containment and cleaning up

: Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).
Keep in suitable, closed containers for disposal.

Other information

: Comply with all applicable federal, state, and local regulations.

SECTION 7. HANDLING AND STORAGE

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- Advice on safe handling : Smoking, eating and drinking should be prohibited in the application area.
 For personal protection see section 8.
- Conditions for safe storage : Electrical installations / working materials must comply with the technological safety standards.
- Materials to avoid : No materials to be especially mentioned.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION**Components with workplace control parameters**

| Components | CAS-No. | Value type (Form of exposure) | Control parameters / Permissible concentration | Basis |
|------------|----------------|----------------------------------|---|--------------|
| ALCOHOL | 254504001-5838 | PEL | 15 mg/m3 Total dust. | OSHA_TRA NS |
| | | PEL | 5 mg/m3 Respirable fraction. | OSHA_TRA NS |
| SUCROSE | 57-50-1 | TWA | 10 mg/m3 | ACGIH |
| | | REL | 5 mg/m3 Respirable. | NIOSH/GUID E |
| | | REL | 10 mg/m3 Total | NIOSH/GUID E |
| | | PEL | 5 mg/m3 Respirable fraction. | OSHA_TRA NS |
| | | PEL | 15 mg/m3 Total dust. | OSHA_TRA NS |

- Engineering measures** : General room ventilation should be adequate for normal conditions of use. However, if unusual operating conditions exist, provide sufficient mechanical (general and/or local exhaust) ventilation to maintain exposure below exposure guidelines (if applicable) or below levels that cause known, suspected or apparent adverse effects.

Personal protective equipment

- Respiratory protection : No personal respiratory protective equipment normally required.

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- Eye protection : Not required under normal conditions of use. Wear splash-proof safety goggles if material could be misted or splashed into eyes.
- Skin and body protection : Wear as appropriate:
Safety shoes
Wear resistant gloves (consult your safety equipment supplier).
- Hygiene measures : General industrial hygiene practice.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

- Physical state : liquid
- Colour : light yellow
- Odour : slight, characteristic
- Odour Threshold : No data available
- pH : 4.0 - 5.0
- Melting point/freezing point : No data available
- Boiling point/boiling range : No data available
- Flash point : 390 °F / 199 °C
Value for Component
- Evaporation rate : No data available
- Flammability (solid, gas) : No data available
- Upper explosion limit : No data available
- Lower explosion limit : No data available
- Vapour pressure : No data available
- Relative vapour density : No data available
- Relative density : No data available
- Density : 1.09 - 1.11 g/cm3

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Solubility(ies)
Water solubility : No data available

Solubility in other solvents : No data available

Partition coefficient: n-
octanol/water : No data available

Thermal decomposition : No data available

Viscosity
Viscosity, dynamic : No data available

Viscosity, kinematic : No data available

Oxidizing properties : No data available

SECTION 10. STABILITY AND REACTIVITY

Reactivity : No decomposition if stored and applied as directed.

Chemical stability : Stable under recommended storage conditions.

Possibility of hazardous
reactions : Product will not undergo hazardous polymerization.

Incompatible materials : Oxidizing agents
Strong bases
strong mineral acids

Hazardous decomposition
products acrolein
Aldehydes
carbon dioxide and carbon monoxide
Hydrocarbons

SECTION 11. TOXICOLOGICAL INFORMATION

Information on likely routes of
exposure : Inhalation
Skin contact
Eye Contact
Ingestion

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Acute toxicity

Not classified based on available information.

Components:**ALCOHOL:**

Acute oral toxicity : LD 50 (Rat): 12,600 mg/kg
Method: OECD Test Guideline 401

Acute inhalation toxicity : LC 50 (Rat): > 570 mg/m3
Exposure time: 1 h
Assessment: Not classified as acutely toxic by inhalation
under GHS.

Acute dermal toxicity : LD 50 (Rabbit): > 10 g/kg

Components:**SUCROSE:**

Acute oral toxicity : LD 50 (Rat): 29,700 mg/kg

Skin corrosion/irritation

Not classified based on available information.

Components:**ALCOHOL:**

Result: Not irritating to skin

Components:**SUCROSE:**

Result: Possibly irritating to skin

Serious eye damage/eye irritation

Not classified based on available information.

Product:

Remarks: Unlikely to cause eye irritation or injury.

Components:**ALCOHOL:**

Result: Mildly irritating to eyes

Components:**SUCROSE:**

Result: Possibly irritating to eyes


Respiratory or skin sensitisation

Skin sensitisation: Not classified based on available information.

Respiratory sensitisation: Not classified based on available information.

Product:

Species: Mouse

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Assessment: Did not cause sensitisation on laboratory animals.

Method: Local lymph node assay

Result: Did not cause sensitisation on laboratory animals.

Germ cell mutagenicity

Not classified based on available information.

Carcinogenicity

Not classified based on available information.

Reproductive toxicity

Not classified based on available information.

STOT - single exposure

Not classified based on available information.

STOT - repeated exposure

Not classified based on available information.

Aspiration toxicity

Not classified based on available information.

Further information

Product:

Remarks: No data available

Components:

SUCROSE:

Remarks: Lung

Carcinogenicity:

IARC

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

OSHA

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

NTP

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

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Components:

ALCOHOL:

Toxicity to fish : LC 50 (Goldfish (Carassius auratus)): > 5,000 mg/l

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Exposure time: 24 h

Method: Static

Remarks: Mortality

Toxicity to daphnia and other aquatic invertebrates : LC 50 (Water flea (Daphnia magna)): > 10,000 mg/l

Exposure time: 24 h

Method: Static

Remarks: Mortality

Persistence and degradability**Components:**

No data available

Bioaccumulative potential**Components:****ALCOHOL:**

Partition coefficient: n-octanol/water : log Pow: -1.76

SUCROSE:

Partition coefficient: n-octanol/water : log Pow: -3.70

Mobility in soil**Components:**

No data available

Other adverse effects

No data available

Product:

Additional ecological information : No data available

Components:

SECTION 13. DISPOSAL CONSIDERATIONS**Disposal methods**

General advice : Dispose of in accordance with all applicable local, state and federal regulations.

Contaminated packaging : Empty remaining contents.



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SECTION 14. TRANSPORT INFORMATION

International transport regulations

REGULATION

| ID NUMBER | PROPER SHIPPING NAME | *HAZARD CLASS | SUBSIDIARY HAZARDS | PACKING GROUP | MARINE POLLUTANT / LTD. QTY. |
|-----------|----------------------|---------------|--------------------|---------------|------------------------------|
|-----------|----------------------|---------------|--------------------|---------------|------------------------------|

U.S. DOT - ROAD

| |
|---------------------|
| Not dangerous goods |
|---------------------|

CFR_RAIL_C

| |
|---------------------|
| Not dangerous goods |
|---------------------|

U.S. DOT - INLAND WATERWAYS

| |
|---------------------|
| Not dangerous goods |
|---------------------|

TDG_ROAD_C

| |
|---------------------|
| Not dangerous goods |
|---------------------|

TDG_RAIL_C

| |
|---------------------|
| Not dangerous goods |
|---------------------|

TDG_INWT_C

| |
|---------------------|
| Not dangerous goods |
|---------------------|

INTERNATIONAL MARITIME DANGEROUS GOODS

| |
|---------------------|
| Not dangerous goods |
|---------------------|

INTERNATIONAL AIR TRANSPORT ASSOCIATION - CARGO

| |
|---------------------|
| Not dangerous goods |
|---------------------|

INTERNATIONAL AIR TRANSPORT ASSOCIATION - PASSENGER

| |
|---------------------|
| Not dangerous goods |
|---------------------|

MX_DG



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Not dangerous goods

***ORM = ORM-D, CBL = COMBUSTIBLE LIQUID**

Marine pollutant

no

Dangerous goods descriptions (if indicated above) may not reflect quantity, end-use or region-specific exceptions that can be applied. Consult shipping documents for descriptions that are specific to the shipment.

SECTION 15. REGULATORY INFORMATION

SARA 311/312 Hazards : No SARA Hazards

US State Regulations

Pennsylvania Right To Know

ALCOHOL

254504001-
5838

20.00 - 30.00

The identity of one or more component(s) is being withheld
 under business confidentiality.

WATER

7732-18-5

50.00 - 70.00 %

SUCROSE

57-50-1

1.00 - 5.00 %

New Jersey Right To Know

ALCOHOL

254504001-
5838

20.00 - 30.00

The identity of one or more component(s) is being withheld
 under business confidentiality.

WATER

7732-18-5

50.00 - 70.00 %

Hydrolyzed Cottonseed extract

223749-08-4

1.00 - 5.00 %

SUCROSE


57-50-1

1.00 - 5.00 %

Trehalose

99-20-7

1.00 - 5.00 %

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California Prop 65

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

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

TSCA : This product is regulated under the United States Food and Drug Act (FDA).

DSL : This product contains the following components that are not on the Canadian DSL nor NDSL.

AUSTR : Not in compliance with the inventory

ENCS : Not in compliance with the inventory

KECL : Not in compliance with the inventory

PICCS : Not in compliance with the inventory

IECSC : Not in compliance with the inventory

Inventories

AICS (Australia), DSL (Canada), IECSC (China), REACH (European Union), ENCS (Japan), ISHL (Japan), KECI (Korea), NZIoC (New Zealand), PICCS (Philippines), TSCA (USA)

Registration: Trade Secret

| Chemical Name | Identification number |
|---------------|-----------------------|
| ALCOHOL | 254504001-5838 |



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SECTION 16. OTHER INFORMATION

Further information

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| NFPA: | HMIS III: | | | | | | |
|---|--|--------|--|--------------|---|-----------------|--|
| <p>Flammability</p> <p>Health</p> <p>Instability</p> <p>Special hazard.</p> | <table border="1"> <tr> <td>HEALTH</td><td></td></tr> <tr> <td>FLAMMABILITY</td><td>1</td></tr> <tr> <td>PHYSICAL HAZARD</td><td></td></tr> </table> <p>0 = not significant, 1 = Slight, 2 = Moderate, 3 = High 4 = Extreme, * = Chronic</p> | HEALTH | | FLAMMABILITY | 1 | PHYSICAL HAZARD | |
| HEALTH | | | | | | | |
| FLAMMABILITY | 1 | | | | | | |
| PHYSICAL HAZARD | | | | | | | |

NFPA Flammable and Combustible Liquids Classification

Combustible Liquid Class IIIB

Full text of H-Statements referred to under sections 2 and 3.

Sources of key data used to compile the Safety Data Sheet

Ashland internal data including own and sponsored test reports

The UNECE administers regional agreements implementing harmonised classification for labelling (GHS) and transport.


The information accumulated herein is believed to be accurate but is not warranted to be whether originating with the company or not. Recipients are advised to confirm in advance of need that the information is current, applicable, and suitable to their circumstances. This SDS has been prepared by Ashland's Environmental Health and Safety Department (1-800-325-3751).

List of abbreviations and acronyms that could be, but not necessarily are, used in this safety data sheet :

ACGIH : American Conference of Industrial Hygienists

BEI : Biological Exposure Index

CAS : Chemical Abstracts Service (Division of the American Chemical Society).

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CMR : Carcinogenic, Mutagenic or Toxic for Reproduction

FG : Food grade

GHS : Globally Harmonized System of Classification and Labeling of Chemicals.

H-statement : Hazard Statement

IATA : International Air Transport Association.

IATA-DGR : Dangerous Goods Regulation by the "International Air Transport Association" (IATA).

ICAO : International Civil Aviation Organization

ICAO-TI (ICAO) : Technical Instructions by the "International Civil Aviation Organization"

IMDG : International Maritime Code for Dangerous Goods

ISO : International Organization for Standardization

logPow : octanol-water partition coefficient

LCxx : Lethal Concentration, for xx percent of test population

LDxx : Lethal Dose, for xx percent of test population.

ICxx : Inhibitory Concentration for xx of a substance

Ecxx : Effective Concentration of xx

N.O.S.: Not Otherwise Specified

OECD : Organization for Economic Co-operation and Development

OEL : Occupational Exposure Limit

P-Statement : Precautionary Statement

PBT : Persistent , Bioaccumulative and Toxic

PPE : Personal Protective Equipment

STEL : Short-term exposure limit

STOT : Specific Target Organ Toxicity

TLV : Threshold Limit Value

TWA : Time-weighted average

vPvB : Very Persistent and Very Bioaccumulative

WEL : Workplace Exposure Level

CERCLA : Comprehensive Environmental Response, Compensation, and Liability Act

DOT : Department of Transportation

FIFRA : Federal Insecticide, Fungicide, and Rodenticide Act

HMIRC : Hazardous Materials Information Review Commission

HMIS : Hazardous Materials Identification System

NFPA : National Fire Protection Association

NIOSH : National Institute for Occupational Safety and Health

OSHA : Occupational Safety and Health Administration

PMRA : Health Canada Pest Management Regulatory Agency

RTK : Right to Know

WHMIS : Workplace Hazardous Materials Information System