SAFETY DATA SHEET

Issue Date 25-May-2016 **Revision Date** 27-Mar-2020 **Version** 2

1. IDENTIFICATION

Product identifier

Product Name GREENFUSION
Green Urethane Dispersion

Other means of identification

Product Code SA-1243
UN/ID no UN1133
Synonyms None

Recommended use of the chemical and restrictions on use

Recommended Use Adhesive, For industrial use only
Uses advised against No information available

Details of the supplier of the safety data sheet

Manufacturer Address GreenFusion Adhesive
15653 Janas Drive
Homer Glen, IL 60491

Company Phone Number 1-877-OMNIFLX (666-4359)

24 Hour Emergency Phone Number INFOTRAC 1-800-535-5053

2. HAZARDS IDENTIFICATION

Classification

OSHA Regulatory Status
This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 2A
Reproductive toxicity	Category 2
Specific target organ toxicity (single exposure)	Category 3
Specific target organ toxicity (repeated exposure)	Category 2
Aspiration toxicity	Category 1
Flammable liquids	Category 2

Label elements

Emergency Overview

Danger

Hazard statements
Causes skin irritation
Causes serious eye irritation
Suspected of damaging fertility or the unborn child
May cause respiratory irritation
May cause drowsiness or dizziness
May cause damage to organs through prolonged or repeated exposure
May be fatal if swallowed and enters airways
Highly flammable liquid and vapor

Appearance Low viscosity **Physical state** Liquid **Odor** Solvent

Precautionary Statements - Prevention
Obtain special instructions before use
Do not handle until all safety precautions have been read and understood
Wear protective gloves/protective clothing/eye protection/face protection
Wash face, hands and any exposed skin thoroughly after handling
Do not breathe dust/fume/gas/mist/vapors/spray
Use only outdoors or in a well-ventilated area
Keep away from heat/sparks/open flames/hot surfaces. - No smoking
Keep container tightly closed
Ground/bond container and receiving equipment
Use explosion-proof electrical/ ventilating / lighting/ / equipment
Use only non-sparking tools
Take precautionary measures against static discharge
Keep cool

Precautionary Statements - Response
IF exposed or concerned: Get medical advice/attention
Specific treatment (see supplemental first aid instructions on this label)
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
If eye irritation persists: Get medical advice/attention
If skin irritation occurs: Get medical advice/attention
IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower
Wash contaminated clothing before reuse
IF INHALED: Remove person to fresh air and keep comfortable for breathing
IF SWALLOWED: Immediately call a POISON CENTER or doctor
Do NOT induce vomiting
In case of fire: Use CO2, dry chemical, or foam to extinguish

Precautionary Statements - Storage
Store locked up
Store in a well-ventilated place. Keep container tightly closed

Precautionary Statements - Disposal
Dispose of contents/container to an approved waste disposal plant

Hazards not otherwise classified (HNOC)

Not applicable

Other Information
May be harmful if swallowed. Harmful to aquatic life with long lasting effects. Harmful to aquatic life.

Unknown acute toxicity
No information available

3. COMPOSITION/INFORMATION ON INGREDIENTS

Mixture
Common name Spray Adhesive.
Synonyms Polyurethane solution.

Chemical name	CAS No	Weight-%	Trade Secret
Acetone	67-64-1	30 - 50	*
Toluene	108-88-3	10 - 30	*
Methyl Ethyl Ketone	78-93-3	7 - 13	*
Hydrated Amorpous Silica	112926-00-8	1 - 5	*

*The exact percentage (concentration) of composition has been withheld as a trade secret.

4. FIRST AID MEASURES

Description of first aid measures

General advice In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).

Eye contact Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Keep eye wide open while rinsing. Call a physician immediately.

Skin contact Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. If skin irritation persists, call a physician. May cause an allergic skin reaction.

Inhalation Move person to fresh air. If breathing stops, apply artificial respiration and seek medical attention immediately. If breathing is difficult, oxygen may be given by a qualified person.

Ingestion Do NOT induce vomiting. Call a physician and/or transport to emergency facility immediately. Clean mouth with water and drink afterwards plenty of water. Never give anything by mouth to an unconscious person.

Self-protection of the first aider Remove all sources of ignition. Use personal protective equipment as required.

Most important symptoms and effects, both acute and delayed

Symptoms Prolonged inhalation of high vapor concentration may result in a narcotic effect ranging from dizziness, nausea and headaches, to unconsciousness. Can cause irritation of the respiratory tract, experienced as nasal discomfort and discharge, with chest pain, shortness of breath and coughing.

Indication of any immediate medical attention and special treatment needed

Note to physicians There is no specific antidote. Treatment of overexposure should be directed at the control of symptoms and the clinical condition of the patient. If it is considered necessary to evacuate the stomach contents, this should be done by means least likely to cause aspiration.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment

Small Fire Dry chemical or CO2.

Large Fire Alcohol or all purpose foam.

Unsuitable extinguishing media CAUTION: Use of water spray when fighting fire may be inefficient. Do not use a solid water stream as it may scatter and spread fire.

Specific hazards arising from the chemical
Extremely flammable. Keep product and empty container away from heat and sources of ignition. In the event of fire, cool tanks with water spray. Most vapors are heavier than air. They will spread along ground and collect in low or confined areas (sewers, basements, tanks). Vapors may travel to source of ignition and flash back.

Hazardous combustion products Carbon monoxide, Carbon dioxide (CO2), Nitrogen oxides (NOx), Smoke and Soot, Thermal decomposition can lead to the evolution of irritant vapors, gases and/or fire

Explosion data
Sensitivity to Mechanical Impact None.
Sensitivity to Static Discharge May be ignited by heat, sparks or flames.

Protective equipment and precautions for firefighters
Respiratory equipment should be worn to avoid inhalation of concentrated fumes. Water spray may be ineffective on the fire, but should be used to cool fire exposed containers and structures. Water spray should also be used to disperse vapors as reignition is possible.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions Ensure adequate ventilation, especially in confined areas. Remove all sources of ignition. Evacuate personnel to safe areas. Use personal protective equipment as required. Keep people away from and upwind of spill/leak.

For emergency responders Eliminate ignition sources, provide ventilation, dike the spill and add absorbant earth or sawdust to the spilled material. Clean-up personnel should wear rubber gloves and respiratory protection. Prevent spill from entering drains, sewers, streams, or other bodies of water. Notify authorities as required.

Environmental precautions

Environmental precautions Prevent further leakage or spillage if safe to do so. Prevent product from entering drains. Do not flush into surface water or sanitary sewer system. See Section 13 for additional disposal information.

Methods and material for containment and cleaning up

Methods for containment Dike spill, absorb with inert material and collect for disposal.

Methods for cleaning up Use a non-combustible material like vermiculite or sand to soak up the product and place into a container for later disposal.

Prevention of secondary hazards Clean contaminated objects and areas thoroughly observing environmental regulations.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling Ensure adequate ventilation, especially in confined areas. Keep away from heat, sparks, flame and other sources of ignition (i.e., pilot lights, electric motors and static electricity). Take precautionary measures against static discharges. Use spark-proof tools and explosion-proof equipment. All equipment used when handling the product must be grounded. Use with local exhaust ventilation. Use personal protective equipment as required. Do not breathe dust/fume/gas/mist/vapors/spray.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep in properly labeled containers. Keep containers tightly closed in a cool, well-ventilated place. Store in accordance with local regulations.

Packaging materials Keep only in the original container/package in a cool well-ventilated place.

Incompatible materials Alkaline materials, strong acids, and oxidizing materials

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines

Chemical name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Acetone 67-64-1	STEL: 500 ppm TWA: 250 ppm	TWA: 1000 ppm TWA: 2400 mg/m³ (vacated) TWA: 750 ppm (vacated) TWA: 1800 mg/m³ (vacated) STEL: 2400 mg/m³ The acetone STEL does not apply to the cellulose acetate fiber industry. It is in effect for all other sectors. (vacated) STEL: 1000 ppm	IDLH: 2500 ppm TWA: 250 ppm TWA: 590 mg/m³
Toluene 108-88-3	TWA: 20 ppm	TWA: 200 ppm (vacated) TWA: 100 ppm (vacated) TWA: 375 mg/m³ (vacated) STEL: 150 ppm (vacated) STEL: 560 mg/m³ Ceiling: 300 ppm	IDLH: 500 ppm TWA: 100 ppm TWA: 375 mg/m³ STEL: 150 ppm STEL: 560 mg/m³
Methyl Ethyl Ketone 78-93-3	STEL: 300 ppm TWA: 200 ppm	TWA: 200 ppm TWA: 590 mg/m³ (vacated) TWA: 200 ppm (vacated) TWA: 590 mg/m³ (vacated) STEL: 300 ppm (vacated) STEL: 885 mg/m³	IDLH: 3000 ppm TWA: 200 ppm TWA: 590 mg/m³ STEL: 300 ppm STEL: 885 mg/m³

NIOSH IDLH Immediately Dangerous to Life or Health

Other Information - Vacated limits revoked by the Court of Appeals decision in AFL-CIO v. OSHA, 965 F.2d 962 (11th Cir., 1992)

Appropriate engineering controls

Engineering Controls Showers
Eyewash stations
Ventilation systems

Individual protection measures, such as personal protective equipment

Eye/face protection Use chemical safety glasses, goggles, or face shields for protection. Eye wash stations should be in the immediate work area.

Skin and body protection Impermeable chemical handling gloves should be worn. Use impermeable clothing

whenever possible to prevent skin contact.

Respiratory protection If spraying this material, use NIOSH approved cartridge respirator or gas mask suitable to keep airborne mists and vapor concentrations below the time-weighted threshold limit values.

General Hygiene Considerations Handle all chemicals with caution and care. Always wash hands before eating, smoking, or using toilet facilities. As with all chemicals, caution must be exercised through the prudent use of protective equipment and handling procedures to minimize exposure.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical state	Liquid		
Appearance	Low viscosity	**Odor**	Solvent
Color	Green	**Odor threshold**	No information available

Property	**Values**	**Remarks • Method**
pH	No information available	
Melting point / freezing point	No information available	
Boiling point / boiling range	56 °C / 132.8 °F	
Flash point	-17 °C / 1.4 °F	
Evaporation rate	No information available	Faster than N-Butyl Acetate
Flammability (solid, gas)	No information available	
Flammability Limit in Air		
Upper flammability limit:	12.8 %	
Lower flammability limit:	1.8 %	
Vapor pressure	24.1 kPa	at 20°C (68°F)
Vapor density	No information available	Heavier than air @ 20°C
Relative density	0.8681 g/cc	
Water solubility	No information available	
Solubility in other solvents	No information available	
Partition coefficient	No information available	
Autoignition temperature	No information available	
Decomposition temperature	No information available	
Kinematic viscosity	No information available	
Dynamic viscosity	No information available	
Explosive properties	No information available	
Oxidizing properties	No information available	

Other Information

Softening point	No information available
Molecular weight	No information available
VOC Content Less Water and Exempts	552.165 g/L
Product density	7.23 lbs/gal
Bulk density	No information available

10. STABILITY AND REACTIVITY

Reactivity
Not applicable

Chemical stability
Stable under normal conditions

Possibility of Hazardous Reactions

None under normal processing.

Hazardous polymerization Hazardous polymerization does not occur.

Conditions to avoid
Excessive heat, poor ventilation, corrosive atmospheres, excessive aging.

Incompatible materials
Alkaline materials, strong acids, and oxidizing materials.

Hazardous Decomposition Products
Carbon monoxide, Carbon dioxide (CO2), Nitrogen oxides (NOx), Smoke and Soot, Thermal decomposition can lead to the evolution of irritant vapors, gases and/or fire

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information May be harmful by inhalation, ingestion, or skin absorption

Inhalation Prolonged inhalation of high vapor concentration may result in a narcotic effect ranging from dizziness, nausea, and headaches, to unconsciousness. Can cause irritation of the respiratory tract, experienced as nasal discomfort and discharge, with chest pain, shortness of breath and coughing.

Eye contact Avoid contact with eyes. May cause severe irritation, tearing, redness, burning sensation, and blurred vision.

Skin contact Avoid contact with skin and clothing. May be harmful in contact with skin. May cause an allergic skin reaction.

Ingestion Do not taste or swallow. Harmful if swallowed. Can cause gastrointestinal irritation, vomiting, nausea, and diarrhea. Aspiration of material into lungs either during ingestion or vomiting can cause chemical pneumonitis which can be fatal.

Chemical name	ATEmix (oral)	ATEmix (dermal)	Inhalation LC50
Acetone 67-64-1	= 5800 mg/kg (Rat)	> 15700 mg/kg (Rabbit)	= 50100 mg/m³ (Rat) 8 h
Toluene 108-88-3	= 2600 mg/kg (Rat)	= 12000 mg/kg (Rabbit)	= 12.5 mg/L (Rat) 4 h
Methyl Ethyl Ketone 78-93-3	= 2483 mg/kg (Rat) = 2737 mg/kg (Rat)	= 5000 mg/kg (Rabbit) = 6480 mg/kg (Rabbit)	= 11700 ppm (Rat) 4 h

Information on toxicological effects

Symptoms Inhalation of high vapor concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin corrosion/irritation Mild skin irritation. May be a skin sensitizer.

Serious eye damage/eye irritation Risk of serious damage to eyes.

Irritation Irritating to eyes, respiratory system and skin.

Corrosivity Not applicable.

Sensitization No information available.

Germ cell mutagenicity No information available.

Carcinogenicity The table below indicates whether each agency has listed any ingredient as a carcinogen.

Chemical name	ACGIH	IARC	NTP	OSHA
Toluene 108-88-3	-	Group 3	-	-
Hydrated Amorpous Silica 112926-00-8	-	Group 3	-	-

IARC (International Agency for Research on Cancer)
Group 3 - Not Classifiable as to Carcinogenicity in Humans

Reproductive toxicity Product is or contains a chemical which is a known or suspected reproductive hazard.

STOT - single exposure No information available.

STOT - repeated exposure No information available.
Chronic toxicity Avoid repeated exposure. May cause adverse liver effects.

Target Organ Effects Central nervous system, Eyes, Kidney, Liver, Respiratory system irritation, Skin.

Aspiration hazard Risk of serious damage to the lungs (by aspiration).

Numerical measures of toxicity No information available

The following values are calculated based on chapter 3.1 of the GHS document .
ATEmix (oral) 4,341.70 mg/kg
ATEmix (dermal) 14,491.10 mg/kg
ATEmix (inhalation-dust/mist) 34.40 mg/l
ATEmix (inhalation-vapor) 34.50 mg/l

12. ECOLOGICAL INFORMATION

Ecotoxicity

Harmful to aquatic life with long lasting effects

This product may contain components with unknown hazards to the aquatic environment.

Chemical name	Algae/aquatic plants	Fish	Crustacea
Acetone 67-64-1	-	4.74 - 6.33: 96 h Oncorhynchus mykiss mL/L LC50 6210 - 8120: 96 h Pimephales promelas mg/L LC50 static 8300: 96 h Lepomis macrochirus mg/L LC50	10294 - 17704: 48 h Daphnia magna mg/L EC50 Static 12600 - 12700: 48 h Daphnia magna mg/L EC50
Toluene 108-88-3	433: 96 h Pseudokirchneriella subcapitata mg/L EC50 12.5: 72 h Pseudokirchneriella subcapitata mg/L EC50 static	15.22 - 19.05: 96 h Pimephales promelas mg/L LC50 flow-through 12.6: 96 h Pimephales promelas mg/L LC50 static 11.0 - 15.0: 96 h Lepomis macrochirus mg/L LC50 static 54: 96 h Oryzias latipes mg/L LC50 static 50.87 - 70.34: 96 h Poecilia reticulata mg/L LC50 static 5.89 - 7.81: 96 h Oncorhynchus mykiss mg/L LC50 flow-through 14.1 - 17.16: 96 h Oncorhynchus mykiss mg/L LC50 static 5.8: 96 h Oncorhynchus mykiss mg/L LC50 semi-static 28.2: 96 h Poecilia reticulata mg/L LC50 semi-static	5.46 - 9.83: 48 h Daphnia magna mg/L EC50 Static 11.5: 48 h Daphnia magna mg/L EC50
Methyl Ethyl Ketone 78-93-3	-	3130 - 3320: 96 h Pimephales promelas mg/L LC50 flow-through	520: 48 h Daphnia magna mg/L EC50 5091: 48 h Daphnia magna mg/L EC50 4025 - 6440: 48 h Daphnia magna mg/L EC50 Static

Persistence and degradability
No information available.

Bioaccumulation
No information available.

Mobility
No information available.

Chemical name	Partition coefficient
Acetone 67-64-1	-0.24
Toluene 108-88-3	2.7
Methyl Ethyl Ketone 78-93-3	0.3

Other adverse effects No information available

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Disposal of wastes When disposing of unused contents the preferred options are to send to a licensed reclaimer or to permitted incinerators. Any disposal practice must be in compliance with federal, state and local regulations. Do not dump into sewers, on the ground, or into any body of water.

Contaminated packaging Do not burn or use a cutting tool on the empty container. Triple rinse containers. May be offered for recycling, reconditioning, or puncture.

US EPA Waste Number D001

Chemical name	RCRA	RCRA - Basis for Listing	RCRA - D Series Wastes	RCRA - U Series Wastes
Acetone 67-64-1	-	Included in waste stream: F039	-	U002
Toluene 108-88-3	U220	Included in waste streams: F005, F024, F025, F039, K015, K036, K037, K149, K151	-	U220
Methyl Ethyl Ketone 78-93-3	U159	Included in waste streams: F005, F039	200.0 mg/L regulatory level	U159

Chemical name	RCRA - Halogenated Organic Compounds	RCRA - P Series Wastes	RCRA - F Series Wastes	RCRA - K Series Wastes
Toluene 108-88-3	-	-	Toxic waste waste number F025 Waste description: Condensed light ends, spent filters and filter aids, and spent desiccant wastes from the production of certain chlorinated aliphatic hydrocarbons, by free radical catalyzed processes. These chlorinated aliphatic hydrocarbons are those having carbon chain lengths ranging from one to and including five, with varying amounts and positions of chlorine substitution.	-

This product contains one or more substances that are listed with the State of California as a hazardous waste.

Chemical name	California Hazardous Waste Status
Acetone 67-64-1	Ignitable
Toluene 108-88-3	Toxic Ignitable
Methyl Ethyl Ketone 78-93-3	Toxic mixture of acetone, methyl acetate, and methyl alcohol Ignitable mixture of acetone, methyl acetate, and methyl alcohol

14. TRANSPORT INFORMATION

DOT Regulated
- **UN/ID no** UN1133
- **Proper shipping name** Adhesives
- **Hazard Class** 3
- **Packing Group** II
- **Emergency Response Guide Number** 128

TDG Regulated
- **UN/ID no** UN1133
- **Proper shipping name** ADHESIVES
- **Hazard Class** 3
- **Packing Group** II

IATA Regulated
- **UN/ID no** UN1133
- **Proper shipping name** Adhesives
- **Hazard Class** 3
- **Packing Group** II

IMDG Regulated
- **UN/ID no** UN1133
- **Proper shipping name** ADHESIVES
- **Hazard Class** 3
- **Packing Group** II
- **EmS-No** F-E, S-D

15. REGULATORY INFORMATION

International Inventories

TSCA	Complies
DSL/NDSL	Complies

Legend:
TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

US Federal Regulations

TSCA 12(b) Export Notification
To the best of our knowledge, this product does not contain any chemical substances subject to 12(b) notification requirements.

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

Chemical name	SARA 313 - Threshold Values %
Toluene - 108-88-3	1.0

SARA 311/312 Hazard Categories

Per the June 13, 2016 Federal Register notice, EPA harmonized the EPCRA 311/312 hazard categories with the 2012 OSHA hazard communication standard for classifying and labeling of chemicals (i.e. GHS). Please refer to Section 2 of the SDS to identify the appropriate hazard categories for reporting purposes.

CWA (Clean Water Act)

This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

Chemical name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Toluene 108-88-3	1000 lb	X	X	X

CERCLA

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302)

Chemical name	Hazardous Substances RQs	CERCLA/SARA RQ	Reportable Quantity (RQ)
Acetone 67-64-1	5000 lb	-	RQ 5000 lb final RQ RQ 2270 kg final RQ
Toluene 108-88-3	1000 lb	-	RQ 1000 lb final RQ RQ 454 kg final RQ
Methyl Ethyl Ketone 78-93-3	5000 lb	-	RQ 5000 lb final RQ RQ 2270 kg final RQ

US State Regulations

California Proposition 65

WARNING This product can expose you to chemicals including those listed below, which is [are] known to the State of California to cause cancer, birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov

Chemical name	California Proposition 65
Toluene - 108-88-3	Developmental

U.S. State Right-to-Know Regulations

Chemical name	New Jersey	Massachusetts	Pennsylvania
Acetone 67-64-1	X	X	X
Toluene 108-88-3	X	X	X
Methyl Ethyl Ketone 78-93-3	X	X	X

U.S. EPA Label Information

EPA Pesticide Registration Number Not applicable

16. OTHER INFORMATION, INCLUDING DATE OF PREPARATION OF THE LAST REVISION

HMIS **Health hazards** 2* **Flammability** 3 **Physical hazards** 0

Chronic Hazard Star Legend ** = Chronic Health Hazard*

Prepared By GreenFusion Adhesive
Issue Date 25-May-2016
Revision Date 27-Mar-2020
Revision Note
No information available

Disclaimer

The information provided in 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 guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet