GREENFIELD

SAFETY DATA SHEET

1. Identification

Product identifier SDA 3A, 192 Proof

Other means of identification None.

Recommended use General purpose solvent.

Recommended restrictionsRefer to the alcohol control authority in which the product is to be used - Canada Revenue Agency

(Excise) in Canada, US Tax and Trade Bureau in the US, etc.

Manufacturer/Importer/Supplier/Distributor information

Company nameAddress
Greenfield Global Inc.
6985 Financial Drive

Missisauga, Ontario L5N 0G3

Canada

Telephone (905) 790-7500

Website http://www.greenfield.com
Emergency phone number CHEMTREC: 1-800-424-9300

2. Hazard identification

Physical hazardsFlammable liquidsCategory 2Health hazardsSerious eye damage/eye irritationCategory 2

Specific target organ toxicity following single Categ

exposure

Category 1 (central nervous system, optic

nerve)

Label elements



Signal word Danger

Hazard statement Highly flammable liquid and vapour. Causes serious eye irritation. Causes damage to organs

(central nervous system, optic nerve).

Precautionary statement

Prevention Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

Keep container tightly closed. Ground and bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting equipment. Use non-sparking tools. Take action to prevent static discharges. Do not breathe mist/vapours. Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Wear protective gloves/protective clothing/eye

protection/face protection.

Response IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. IF IN

EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. IF exposed or concerned: Call a POISON CENTRE/doctor. If eye irritation persists: Get medical advice/attention. In case of fire: Use water fog, alcohol-resistant

foam, dry chemical powder, carbon dioxide to extinguish.

Storage Store in a well-ventilated place. Keep cool. Store locked up.

Disposal Dispose of contents/container in accordance with local/regional/national/international regulations.

Supplemental information None.

Other hazards None known.

3. Composition/information on ingredients

Mixtures

SDA 3A, 192 Proof SDS Canada

959561 Version #: 02 Revision date: 13-Décembre-2023 Issue date: 07-December-2021

Chemical name	Common name and synonyms	CAS number	%
Ethanol		64-17-5	95.3
Methanol		67-56-1	4.68
Other components below re	eportable levels		0.02

All concentrations are in percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

4. First-aid measures

Inhalation Move to fresh air. Call a physician if symptoms develop or persist.

Skin contactTake off immediately all contaminated clothing. Rinse skin with water/shower. Get medical

attention if irritation develops and persists.

Eye contactImmediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if

present and easy to do. Continue ringing. Get medical attention if irritation develops and persists.

present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists.

Ingestion Call a physician or poison control centre immediately. Do not induce vomiting. Rinse mouth. Do

not induce vomiting without advice from poison control center. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs. Do not use mouth-to-mouth method if victim ingested the substance. Induce artificial respiration with the aid of a pocket mask equipped with a

one-way valve or other proper respiratory medical device.

Most important symptoms/effects, acute and

symptoms/effects, acute and delayed

Narcosis. Headache. Behavioural changes. Decrease in motor functions. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Coughing.

Methanol: Human exposure to methanol may result in illness, systemic poisoning, blindness, optic nerve damage and perhaps death, after being ingested, absorbed through the skin or inhaled. Death due to cardiac or respiratory failure has been reported in some cases from consumption of as little as 30 mls.

Indication of immediate medical attention and special treatment needed

Provide general supportive measures and treat symptomatically. Thermal burns: Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. Continue flushing during transport to hospital. Keep victim under observation. Symptoms may be delayed.

General information

Take off all contaminated clothing immediately. If you feel unwell, seek medical advice (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Wash contaminated clothing before reuse.

5. Fire-fighting measures

Suitable extinguishing media Unsuitable extinguishing media Water fog. Alcohol resistant foam. Dry chemical powder. Carbon dioxide (CO2).

Do not use water jet as an extinguisher, as this will spread the fire.

Specific hazards arising from the chemical

Vapours may form explosive mixtures with air. Vapours may travel considerable distance to a source of ignition and flash back. During fire, gases hazardous to health may be formed. Combustion products may include: Carbon oxides.

Special protective equipment and precautions for firefighters

Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

Fire fighting equipment/instructions

In case of fire and/or explosion do not breathe fumes. Move containers from fire area if you can do so without risk. Use water spray to keep fire-exposed containers cool.

Specific methods

Use standard firefighting procedures and consider the hazards of other involved materials.

General fire hazards Highly flammable liquid and vapour.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Wear appropriate protective equipment and clothing during clean-up. Do not breathe mist/vapours. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.

Methods and materials for containment and cleaning up

Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Keep combustibles (wood, paper, oil etc) away from spilled material. Take precautionary measures against static discharge. Use only non-sparking tools.

Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Following product recovery, flush area with water.

Small Spills: Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal. Clean surface thoroughly to remove residual contamination.

Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS. Avoid discharge into drains, water courses or onto the ground.

Environmental precautions

7. Handling and storage

Precautions for safe handling

Do not handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. Explosion-proof general and local exhaust ventilation. Take precautionary measures against static discharges. All equipment used when handling the product must be grounded. Use non-sparking tools and explosion-proof equipment. Do not breathe mist/vapours. Avoid contact with eyes. Avoid prolonged exposure. When using, do not eat, drink or smoke. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Observe good industrial hygiene practices.

Conditions for safe storage, including any incompatibilities

Store locked up. Keep away from heat, sparks and open flame. Prevent electrostatic charge build-up by using common bonding and grounding techniques. Store in a cool, dry place out of direct sunlight. Store in tightly closed container. Store in a well-ventilated place. Keep in an area equipped with sprinklers. Store away from incompatible materials (see section 10 of the SDS).

8. Exposure controls/personal protection

Occupational exposure limits

116	ACGIH	Throck	ALA I	imit \	/aluac
UJ.	ACGIR	1111621	IUIU L	-111111 '	vaiues

Components	Туре	Value	
Ethanol (CAS 64-17-5)	STEL	1000 ppm	
Methanol (CAS 67-56-1)	STEL	250 ppm	
	TWA	200 ppm	
Canada. Alberta OELs (Occupation	onal Health & Safety Code, Scl	nedule 1, Table 2)	
Components	Туре	Value	

Components	туре	Value
Ethanol (CAS 64-17-5)	TWA	1880 mg/m3
		1000 ppm
Methanol (CAS 67-56-1)	STEL	328 mg/m3
		250 ppm
	TWA	262 mg/m3
		200 ppm

Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended)

Components	, Туре	Value	
Ethanol (CAS 64-17-5)	STEL	1000 ppm	
Methanol (CAS 67-56-1)	STEL	250 ppm	
	TWA	200 ppm	

Canada Manitoha OELs (Pog. 217/2006, The Workplace Safety And Health Act)

Components	Type	Value	
Ethanol (CAS 64-17-5)	STEL	1000 ppm	
Methanol (CAS 67-56-1)	STEL	250 ppm	
	TWA	200 ppm	

SDA 3A, 192 Proof SDS Canada Issue date: 07-December-2021

Components	Туре	Value	
Ethanol (CAS 64-17-5)	STEL	1000 ppm	
Methanol (CAS 67-56-1)	STEL	250 ppm	
	TWA	200 ppm	
Canada. Quebec OELs. (Ministry	of Labor - Regulation respecting	g occupational health and safety)	
Components	Туре	Value	
Ethanol (CAS 64-17-5)	TWA	1880 mg/m3	
		1000 ppm	
Methanol (CAS 67-56-1)	STEL	328 mg/m3	
		250 ppm	
	TWA	262 mg/m3	
		200 ppm	
Canada. Saskatchewan OELs (O Components	ccupational Health and Safety Ro	egulations, 1996, Table 21) Value	
Ethanol (CAS 64-17-5)	15 minute	1250 ppm	
	8 hour	1000 ppm	
Methanol (CAS 67-56-1)	15 minute	250 ppm	
	8 hour	200 ppm	

Biological limit values

ACGIH Biological Exposure Indices

Components	Value	Determinant	Specimen	Sampling Time	
Methanol (CAS 67-56-1)	15 mg/l	Methanol	Urine	*	

^{* -} For sampling details, please see the source document.

Exposure guidelines

Canada - Alberta OELs: Skin designation

Methanol (CAS 67-56-1) Can be absorbed through the skin.

Canada - British Columbia OELs: Skin designation

Methanol (CAS 67-56-1) Can be absorbed through the skin.

Canada - Manitoba OELs: Skin designation

Methanol (CAS 67-56-1) Danger of cutaneous absorption

Canada - Ontario OELs: Skin designation

Can be absorbed through the skin. Methanol (CAS 67-56-1)

Canada - Quebec OELs: Skin designation

Methanol (CAS 67-56-1) Can be absorbed through the skin.

Canada - Saskatchewan OELs: Skin designation

Methanol (CAS 67-56-1) Can be absorbed through the skin.

US ACGIH Threshold Limit Values: Skin designation

Methanol (CAS 67-56-1) Danger of cutaneous absorption

Appropriate engineering

controls

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

acceptable level. Provide eyewash station and safety shower.

Individual protection measures, such as personal protective equipment

Chemical goggles are recommended. Eye/face protection

Skin protection

Wear appropriate chemical resistant gloves. Suitable gloves can be recommended by the glove **Hand protection**

supplier. Be aware that the liquid may penetrate the gloves. Frequent change is advisable.

Wear appropriate chemical resistant clothing. Use of an impervious apron is recommended. Other

Respiratory protection Chemical respirator with organic vapour cartridge and full facepiece.

Thermal hazards Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations

When using do not smoke. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work

clothing and protective equipment to remove contaminants.

9. Physical and chemical properties

Appearance

Physical state Liquid. Form Liquid.

Colour Clear liquid; invisible vapour.

Odour Not available.

Odour threshold Not available.

pH Not available.

Melting point/freezing point -144 °C (-227.2 °F)

Initial boiling point and boiling 78.4 °C (173.12 °F)

range

Flash point 13 - 16 °C (55.4 - 60.8 °F) Closed cup

Evaporation rate 3.2 (Butyl acetate = 1)

Flammability (solid, gas) Not applicable.

Upper/lower flammability or explosive limits

Explosive limit - lower (%) 3.3 % (Ethyl Alcohol) **Explosive limit - upper** 19 % (Ethyl Alcohol)

(%)

Vapour pressure 5.99 kPa (Ethyl Alcohol) (20 °C (68 °F))

Vapour density 1.45 (Air = 1)

Relative density Not available.

Solubility(ies)

Solubility (water) Completely soluble.

Partition coefficient Not available.

(n-octanol/water)

Auto-ignition temperature 363 °C (685.4 °F) (Ethyl Alcohol)

Decomposition temperature Not available. **Viscosity** Not available.

Other information

Bulk density 7.04 lb/gal @15.56°C (60°F)

Explosive properties Not explosive. **Oxidising properties** Not oxidising.

10. Stability and reactivity

ReactivityThe product is stable and non-reactive under normal conditions of use, storage and transport.

Chemical stability Material is stable under normal conditions.

Possibility of hazardous

reactions

No dangerous reaction known under conditions of normal use.

Conditions to avoid Avoid heat, sparks, open flames and other ignition sources. Avoid temperatures exceeding the

flash point. Contact with incompatible materials.

Incompatible materials Strong oxidising agents.

Hazardous decomposition No hazardous decomposition products are known.

products

11. Toxicological information

Information on likely routes of exposure

Inhalation May cause damage to organs by inhalation. Prolonged inhalation may be harmful.

Skin contact May be absorbed through the skin. Frequent or prolonged contact may defat and dry the skin,

leading to discomfort and dermatitis.

Eye contact Causes serious eye irritation.

Ingestion May be harmful if swallowed. However, ingestion is not likely to be a primary route of occupational

exposure.

Symptoms related to the physical, chemical and toxicological characteristics

Narcosis. Headache. Behavioural changes. Decrease in motor functions. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Coughing.

Methanol: Human exposure to methanol may result in illness, systemic poisoning, blindness, optic nerve damage and perhaps death, after being ingested, absorbed through the skin or inhaled. Death due to cardiac or respiratory failure has been reported in some cases from consumption of as little as 30 mls.

Information on toxicological effects

Acute toxicity May be harmful if swallowed.

Components Species Test Results

Ethanol (CAS 64-17-5)

Acute Inhalation Vapour

LC50 Rat 117 - 125 mg/l, 4 Hours

Oral

LD50 Rat 10470 mg/kg

Skin corrosion/irritation Prolonged skin contact may cause temporary irritation.

Serious eye damage/eye irritation

Causes serious eye irritation.

Respiratory or skin sensitisation

Respiratory sensitisation Not a respiratory sensitiser.

Skin sensitisation This product is not expected to cause skin sensitisation.

Germ cell mutagenicityNo data available to indicate product or any components present at greater than 0.1% are

mutagenic or genotoxic.

Carcinogenicity

ACGIH Carcinogens

Ethanol (CAS 64-17-5)

A3 Confirmed animal carcinogen with unknown relevance to

humans.

Canada - Manitoba OELs: carcinogenicity

Ethanol (CAS 64-17-5) Confirmed animal carcinogen with unknown relevance to humans.

US. National Toxicology Program (NTP) Report on Carcinogens

Ethanol (CAS 64-17-5) Known To Be Human Carcinogen.

Reproductive toxicity

This product is not expected to cause reproductive or developmental effects.

Specific target organ toxicity - single exposure

Causes damage to organs (central nervous system, optic nerve).

Specific target organ toxicity -

repeated exposure

Not classified.

Aspiration hazard Not an aspiration hazard.

Chronic effects Prolonged inhalation may be harmful.

12. Ecological information

Ecotoxicity The product is not classified as environmentally hazardous. However, this does not exclude the

possibility that large or frequent spills can have a harmful or damaging effect on the environment.

 Components
 Species
 Test Results

 Ethanol (CAS 64-17-5)
 Aquatic

 Acute
 Algae
 EC10
 Freshwater algae
 11.5 mg/l, 72 hours

 EC50
 Freshwater algae
 275 mg/l, 72 hours

 Marine water algae
 1900 mg/l

Components		Species	Test Results
Fish	LC50	Freshwater fish	11200 mg/l, 24 hours
Invertebrate	EC50	Freshwater invertebrate	5012 mg/l, 48 hours
		Marine water invertebrate	857 mg/l, 48 hours
Other	EC50	Lemna minor	4432 mg/l, 7 days
Chronic			
Algae	NOEC	Marine water algae	1580 mg/l
Fish	NOEC	Freshwater fish	250 mg/l
Invertebrate	NOEC	Freshwater invertebrate	9.6 mg/l, 10 days
		Marine water invertebrate	79 mg/l, 96 hours
Other	NOEC	Lemna minor	280 mg/l, 7 days
Other			
Acute			
Micro-organisms	LC50	Micro-organisms	5800 mg/l, 4 hours
Terrestrial			
Acute			
Plant	EC50	Terrestrial plant	633 mg/kg dw
Methanol (CAS 67-56-1)			
Aquatic			
Acute			
Crustacea	EC50	Daphnia magna	> 10000 mg/l, 48 hours
Fish	LC50	Bluegill (Lepomis macrochirus)	15400 mg/l, 96 hours

Persistence and degradability

Expected to be readily biodegradable.

Bioaccumulative potential

The product is not expected to bioaccumulate.

Partition coefficient n-octanol / water (log Kow)

Methanol (CAS 67-56-1)

-0.77

Mobility in soil

Expected to be mobile in soil.

Other adverse effects

The product contains volatile organic compounds which have a photochemical ozone creation

potential.

13. Disposal considerations

Disposal instructions

Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Dispose of contents/container in accordance with local/regional/national/international regulations.

Local disposal regulations

Dispose in accordance with all applicable regulations.

Hazardous waste code

The waste code should be assigned in discussion between the user, the producer and the waste disposal company.

Waste from residues / unused

products

Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see:

Disposal instructions).

Contaminated packaging

Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or

disposal.

14. Transport information

TDG

UN number UN1986

UN proper shipping name

ALCOHOLS, FLAMMABLE, TOXIC, N.O.S. (Ethanol; Methanol)

Transport hazard class(es)

Class 3 Subsidiary risk 6.1 Packing group **Environmental hazards** No.

Special precautions for user Read safety instructions, SDS and emergency procedures before handling.

IATA

UN number UN1986

UN proper shipping name Alcohols, flammable, toxic, n.o.s. (Ethanol; Methanol)

Transport hazard class(es)

Class 3
Subsidiary risk 6.1
Packing group II
Environmental hazards No.
ERG Code 3HP

Special precautions for user Read safety instructions, SDS and emergency procedures before handling.

IMDG

UN number UN1986

UN proper shipping name ALCOHOLS, FLAMMABLE, TOXIC, N.O.S. (Ethanol; Methanol)

Transport hazard class(es)

Class 3
Subsidiary risk 6.1
Packing group II
Environmental hazards

Marine pollutant No. EmS F-E, S-D

Special procautions for user Read

Special precautions for user Read safety instructions, SDS and emergency procedures before handling.

Transport in bulk according to Annex II of MARPOL 73/78 and

Annex II of MARPOL 73/78 at the IBC Code

15. Regulatory information

Canadian regulations This product has been classified in accordance with the hazard criteria of the HPR and the SDS

contains all the information required by the HPR.

This product is not intended to be transported in bulk.

Controlled Drugs and Substances Act

Not regulated.

Export Control List (CEPA 1999, Schedule 3)

Not listed.

Greenhouse Gases

Not listed.

Ontario. Toxic Substances. Toxic Reduction Act, 2009. Regulation 455/09 (July 1, 2011)

Methanol (CAS 67-56-1)

Precursor Control Regulations

Not regulated.

International regulations

Stockholm Convention

Not applicable.

Rotterdam Convention

Not applicable.

Kyoto Protocol

Not applicable.

Montreal Protocol

Not applicable.

Basel Convention

Not applicable.

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Industrial Chemicals (AICIS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No

Country(s) or regionInventory nameOn inventory (yes/no)*JapanInventory of Existing and New Chemical Substances (ENCS)YesKoreaExisting Chemicals List (ECL)YesNew ZealandNew Zealand InventoryYesPhilippinesPhilippine Inventory of Chemicals and Chemical SubstancesYes

(PICCS)

Taiwan Taiwan Chemical Substance Inventory (TCSI)

United States & Puerto Rico Toxic Substances Control Act (TSCA) Inventory

Yes

16. Other information

Issue date07-December-2021Revision date13-December-2023

Version No.

Disclaimer

This product is subject to Greenfield Global Inc.'s terms and conditions, which can be found at http://www.greenfield.com/tc-po-can/. The information in this SDS is, to the best of the company's knowledge and belief, accurate and reliable as of the date indicated. The information in this safety data sheet must be regarded as a description of the safety requirements relating to the material and not as a quarantee of the properties thereof. No warranty quarantee or representation is made to its accuracy, reliability, or completeness. It is the user's responsibility to satisfy itself as to the suitability of such information for its own particular use. This information relates only to the specific product designated and may not be valid for such product used in combination with any other materials or in any process. It is at all times the responsibility of the user to take all necessary measures to comply with legal requirements and local regulations applicable to the use, storage, or handling of the product. THE COMPANY MAKES NO WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ANY WARRANTY OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, COURSE OF PERFORMANCE, OR USAGE OF TRADE, ALL OF WHICH ARE EXPRESSLY DISCLAIMED. Given the variety of factors that can affect the use and application of the product, which are uniquely within the user's knowledge and control, it is essential that the user evaluate the product to independently determine whether it is fit for a particular purpose, suitable, safe, and/or lawful for user's method of use or application.

^{*}A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).