



Starbrite® Startron Small Engine Gas Fuel Additive

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations
Revision date: 10/24/2013 Supersedes: 05/08/2012

Version: 1.0

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY

Product Identifier

Product form: Mixture

Product name: Starbrite® Startron Small Engine Formula Gas Fuel Additive

Product code: 143XX

Intended Use Of The Product

Use of the substance/mixture: Fuel additive

Name, Address, And Telephone Of The Responsible Party

Starbrite®
4041 SW 47th Avenue
Fort Lauderdale, FL 33314
(954)587-6280
www.starbrite.com

Emergency Telephone Number

Emergency number : (703) 527-3887 CHEMTREC

SECTION 2: HAZARDS IDENTIFICATION

Classification Of The Substance Or Mixture

GHS-US classification

Flam. Liq. 4 H227
Skin Irrit. 2 H315
STOT SE 3 H336
Asp. Tox. 1 H304

Label Elements

GHS-US labeling

Hazard pictograms (GHS-US)



Signal word (GHS-US)

: Danger

Hazard statements (GHS-US)

: H227 - Combustible liquid
H304 - May be fatal if swallowed and enters airways
H315 - Causes skin irritation
H336 - May cause drowsiness or dizziness

Precautionary statements (GHS-US)

: P210 - Keep away from heat/sparks/open flames/hot surfaces - No smoking.
P261 - Avoid breathing fume/mist/vapours/spray.
P264 - Wash hands, forearms, and exposed areas thoroughly after handling.
P271 - Use only outdoors or in a well-ventilated area.
P280 - Wear protective gloves/protective clothing/eye protection/face protection.
P301+P310 - IF SWALLOWED: Immediately call a POISON CENTER or doctor.
P302+P352 - IF ON SKIN: Wash with plenty of soap and water.
P304+P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P312 - Call a POISON CENTER or doctor if you feel unwell.
P321 - Specific treatment (see section 4).
P331 - If swallowed, do NOT induce vomiting.
P332+P313 - If skin irritation occurs: Get medical advice/attention.
P362 - Take off contaminated clothing.
P370+P378 - In case of fire: Use appropriate media for extinction.
P233 - Keep container tightly closed.
P403+P235 - Store in a well-ventilated place. Keep cool.

Starbrite® Startron Small Engine Gas Fuel Additive

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

P405 - Store locked up.

P501 - Dispose of contents/container according to local, regional, national, territorial, provincial, and international regulations.

Other Hazards

Other hazards not contributing to the classification:

Hazardous to the aquatic environment – Chronic Hazard Category 2.

H411 - Toxic to aquatic life with long lasting effects.



Unknown acute toxicity (GHS US) Not available

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Mixture

Name	Product Identifier	% (w/w)	GHS-US classification
Petroleum distillates, hydrotreated light	(CAS No.) 64742-47-8	90 - 95	Flam. Liq. 3, H226 Skin Irrit. 2, H315 STOT SE 3, H336 Asp. Tox. 1, H304
Kerosine, petroleum	(CAS No.) 8008-20-6	0 - 10	Flam. Liq. 3, H226 Skin Irrit. 2, H315 STOT SE 3, H336 Asp. Tox. 1, H304
Kerosine, petroleum, hydrodesulfurized	(CAS No.) 64742-81-0	0 - 10	Flam. Liq. 3, H226 Skin Irrit. 2, H315 STOT SE 3, H336 Asp. Tox. 1, H304

Full text of H-phrases: see section 16

SECTION 4: FIRST AID MEASURES

Description Of First Aid Measures

General: Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).

Inhalation: When symptoms occur: go into open air and ventilate suspected area. Remove to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER/doctor/physician if you feel unwell.

Skin Contact: Remove contaminated clothing. Gently wash with plenty of soap and water. Wash contaminated clothing before reuse. If skin irritation occurs: Get medical advice/attention.

Eye Contact: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Ingestion: Rinse mouth. Do NOT induce vomiting. IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.

Most Important Symptoms And Effects Both Acute and Delayed

General: Vapours may cause drowsiness and dizziness. Causes skin irritation. May be fatal if swallowed and enters airways.

Inhalation: May cause drowsiness or dizziness.

Skin Contact: Causes skin irritation.

Eye Contact: May cause minor eye irritation.

Ingestion: May be fatal if swallowed and enters airways.

Indication Of Any Immediate Medical Attention And Special Treatment Needed

Any material aspirated during vomiting may cause lung injury. Avoid emesis. If stomach contents must be evacuated use method least likely to result in aspiration.

SECTION 5: FIREFIGHTING MEASURES

Extinguishing Media

Suitable extinguishing media: Dry chemical powder, alcohol-resistant foam, carbon dioxide (CO₂).

Unsuitable extinguishing media: Do not use a heavy water stream. Use of heavy stream of water may spread fire.

Special Hazards Arising From The Substance Or Mixture

Fire hazard: Flammable liquid and vapour.

Starbrite® Startron Small Engine Gas Fuel Additive

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Explosion hazard: May form flammable/explosive vapour-air mixture.

Reactivity: Product is stable.

Advice For Firefighters

Precautionary measures fire: Exercise caution when fighting any chemical fire.

Firefighting instructions: Use water spray or fog for cooling exposed containers.

Protection during firefighting: Do not enter fire area without proper protective equipment, including respiratory protection.

Hazardous Combustion Products: Carbon oxides (CO, CO₂).

Reference To Other Sections

Refer to section 9 for flammability properties.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment And Emergency Procedures

General measures: Use special care to avoid static electric charges. Keep away from heat/sparks/open flames/hot surfaces – No smoking. Avoid breathing (vapor, mist). Use only outdoors or in a well-ventilated area.

For Non-Emergency Personnel

Protective equipment: Use appropriate personal protection equipment (PPE).

Emergency procedures: Evacuate unnecessary personnel.

For Emergency Personnel

Protective equipment: Equip cleanup crew with proper protection.

Emergency procedures: Ventilate area.

Environmental Precautions

Prevent entry to sewers and public waters.

Methods And Material For Containment And Cleaning Up

For containment: Absorb and/or contain spill with inert material, then place in suitable container. Do not take up in combustible material such as: saw dust or cellulosic material.

Methods for cleaning up: Clear up spills immediately and dispose of waste safely. Use only non-sparking tools.

Reference To Other Sections

See heading 8, exposure controls and personal protection.

SECTION 7: HANDLING AND STORAGE

Precautions For Safe Handling

Additional hazards when processed: Handle empty containers with care because residual vapours are flammable.

Hygiene measures: Handle in accordance with good industrial hygiene and safety procedures. Wash hands and other exposed areas with mild soap and water before eating, drinking, or smoking and again when leaving work.

Conditions For Safe Storage, Including Any Incompatibilities

Technical measures: Proper grounding procedures to avoid static electricity should be followed.

Storage conditions: Store in a dry, cool and well-ventilated place. Keep container tightly closed. Store locked up.

Incompatible materials: Strong acids. Strong bases. Strong oxidizers.

Specific End Use(s) Fuel additive

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Control Parameters

Kerosine, petroleum (8008-20-6)		
USA ACGIH	ACGIH TWA (mg/m ³)	200 mg/m ³ (application restricted to conditions in which there are negligible aerosol exposures)
USA NIOSH	NIOSH REL (TWA) (mg/m ³)	100 mg/m ³
Kerosine, petroleum, hydrodesulfurized (64742-81-0)		
USA ACGIH	ACGIH TWA (mg/m ³)	200 mg/m ³ (application restricted to conditions in which there are negligible aerosol exposures)

Starbrite® Startron Small Engine Gas Fuel Additive

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Exposure Controls

Appropriate engineering controls: Proper grounding procedures to avoid static electricity should be followed. Take precautionary measures against static discharges. Gas detectors should be used when flammable gases/vapours may be released. Ensure adequate ventilation, especially in confined areas. Ensure all national/local regulations are observed.

Personal protective equipment: Fireproof clothing. Gloves. High gas/vapour concentration: gas mask.



Hand protection: Wear chemically resistant protective gloves.

Eye protection: Chemical goggles or safety glasses.

Skin and body protection: Wear suitable protective clothing.

Respiratory protection: Use NIOSH-approved respirator where airborne concentrations of vapor or mist are expected to exceed exposure limits.

Other information: When using, do not eat, drink or smoke.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Information On Basic Physical And Chemical Properties

Physical state	: Liquid
Appearance	: Clear
Odor	: Not available
Odor threshold	: Not available
pH	: Not available
Relative evaporation rate (butylacetate=1)	: Not available
Melting/freezing point	: -42°C (-44°F)
Boiling point	: Not available
Flash point	: 69°C (156°F)
Auto-ignition temperature	: Not available
Lower flammable limit	: Not available
Upper flammable limit	: Not available
Vapour pressure	: Not available
Relative vapour density at 20 °C	: Not available
Specific gravity	: Not available
Solubility	: Not available
Viscosity	: Not available

SECTION 10: STABILITY AND REACTIVITY

Reactivity Product is stable.

Chemical Stability Flammable liquid and vapour. May form flammable/explosive vapour-air mixture.

Possibility Of Hazardous Reactions Hazardous polymerization will not occur.

Conditions To Avoid Direct sunlight. Extremely high or low temperatures. Open flame. Heat. Sparks.

Incompatible Materials Strong acids. Strong bases. Strong oxidizers.

Hazardous Decomposition Products Carbon oxides (CO, CO₂).

SECTION 11: TOXICOLOGICAL INFORMATION

Information On Toxicological Effects - Product

Acute toxicity : Not classified

LD50 and LC50 Data: Not available

Skin corrosion/irritation: Causes skin irritation.

Serious eye damage/irritation: Not classified

Respiratory or skin sensitisation: Not classified

Starbrite® Startron Small Engine Gas Fuel Additive

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Germ cell mutagenicity: Not classified

Teratogenicity: Not available

Carcinogenicity: Not classified

Specific target organ toxicity (repeated exposure): Not classified

Reproductive toxicity: Not classified

Specific target organ toxicity (single exposure): May cause drowsiness or dizziness.

Aspiration hazard: May be fatal if swallowed and enters airways.

Symptoms/injuries after inhalation: May cause drowsiness or dizziness.

Symptoms/injuries after skin contact: Causes skin irritation.

Symptoms/injuries after eye contact: May cause minor eye irritation.

Symptoms/injuries after ingestion: May be fatal if swallowed and enters airways.

Information On Toxicological Effects - Ingredient(s)

LD50 and LC50 Data

Kerosine, petroleum (8008-20-6)	
LD50 oral rat	> 5000 mg/kg
LD50 dermal rabbit	> 2000 mg/kg
LC50 inhalation rat (mg/l)	> 5.28 mg/l (Exposure time: 4 h)
Kerosine, petroleum, hydrodesulfurized (64742-81-0)	
LD50 oral rat	> 5000 mg/kg
LD50 dermal rabbit	> 2000 mg/kg
LC50 inhalation rat (mg/l)	> 5.2 mg/l (Exposure time: 4 h)
Petroleum distillates, hydrotreated light (64742-47-8)	
LD50 oral rat	> 5000 mg/kg
LD50 dermal rabbit	> 2000 mg/kg
LC50 inhalation rat (mg/l)	> 5.2 mg/l (Exposure time: 4 h)
Kerosine, petroleum (8008-20-6)	
National Toxicity Program (NTP) Status	1

SECTION 12: ECOLOGICAL INFORMATION

Toxicity

Kerosine, petroleum, hydrodesulfurized (64742-81-0)	
LC50 fish 1	45 mg/l (Exposure time: 96 h - Species: Pimephales promelas [flow-through])
EC50 Daphnia 1	4720 mg/l (Exposure time: 48 h - Species: Den-dronereides heteropoda)
LC50 fish 2	1740 mg/l (Exposure time: 96 h - Species: Lepomis macrochirus [static])
Petroleum distillates, hydrotreated light (64742-47-8)	
LC50 fishes 1	45 mg/l (Exposure time: 96 h - Species: Pimephales promelas [flow-through])
EC50 Daphnia 1	4720 mg/l (Exposure time: 96 h - Species: Den-dronereides heteropoda)
LC50 fish 2	2.2 mg/l (Exposure time: 96 h - Species: Lepomis macrochirus [static])

Persistence And Degradability

Starbrite Startron Small Engine Gas Fuel Additive	
Persistence and degradability	Not established.

Bioaccumulative Potential

Starbrite Startron Small Engine Gas Fuel Additive	
Bioaccumulative potential	Not established.
Kerosine, petroleum, hydrodesulfurized (64742-81-0)	
BCF fish 1	61 - 159
Petroleum distillates, hydrotreated light (64742-47-8)	
BCF fish 1	61 - 159

Starbrite® Startron Small Engine Gas Fuel Additive

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Mobility In Soil Not available

Other Adverse Effects Avoid release to the environment.

SECTION 13: DISPOSAL CONSIDERATIONS

Waste disposal recommendations: Dispose of waste material in accordance with all local, regional, national, provincial, territorial and international regulations.

Additional information: Handle empty containers with care because residual vapours are flammable.

Ecology - waste materials: Hazardous waste due to toxicity.

SECTION 14: TRANSPORT INFORMATION

In accordance with ICAO/IATA/DOT/TDG

UN Number (DOT): NA1993

UN Number (IATA/IMDG): UN3082

Proper Shipping Name

DOT Proper Shipping Name : Combustible Liquid, n.o.s. (Petroleum distillates, hydrotreated light)

UN Proper Shipping Name (IMDG/ICAO/IATA/TDG) : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Petroleum distillates, hydrotreated light)

Transport hazard class(es)

Department of Transportation (DOT) Hazard Classes : 3 - Class 3 - Flammable and combustible liquid 49 CFR 173.120

DOT Symbols : D - Proper shipping name for domestic use only, G - Identifies PSN requiring a technical name

Class (IMDG/ICAO/IATA/TDG) : 9

Hazard Labels (IMDG/ICAO/IATA/TDG) : 9



Packing group (DOT/IMDG/ICAO/IATA) : III - Minor Danger

DOT Special Provisions (49 CFR 172.102) : IB3 - Authorized IBCs: Metal (31A, 31B and 31N); Rigid plastics (31H1 and 31H2); Composite (31HZ1 and 31HA2, 31HB2, 31HN2, 31HD2 and 31HH2). Additional Requirement: Only liquids with a vapor pressure less than or equal to 110 kPa at 50 C (1.1 bar at 122 F), or 130 kPa at 55 C (1.3 bar at 131 F) are authorized, except for UN2672 (also see Special Provision IP8 in Table 2 for UN2672).

T1 - 1.5 178.274(d)(2) Normal..... 178.275(d)(2)

T4 - 2.65 178.274(d)(2) Normal..... 178.275(d)(3)

TP1 - The maximum degree of filling must not exceed the degree of filling determined by the following: Degree of filling = $97 / (1 + a (tr - tf))$ Where: tr is the maximum mean bulk temperature during transport, and tf is the temperature in degrees celsius of the liquid during filling.

DOT Packaging Exceptions (49 CFR 173.xxx) : 150

DOT Packaging Non Bulk (49 CFR 173.xxx) : 203

DOT Packaging Bulk (49 CFR 173.xxx) : 241

Additional information

Emergency Response Guide (ERG) Number : 128

Other Information : This product meets the limited quantities exception as follows: DOT: Not regulated as dangerous goods except when shipped in bulk. Otherwise, the above descriptions apply.

Overland transport Regulated by DOT as NA1993 Combustible liquid, n.o.s. (Petroleum distillates, hydrotreated light)

Transport by sea

DOT Vessel Stowage Location : A - The material may be stowed "on deck" or "under deck" on a cargo vessel and on a passenger vessel.

MFAG-No (IMDG) : 171

Starbrite® Startron Small Engine Gas Fuel Additive

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Special Provisions (IMDG)	: 274, 335
Packaging Instructions (IMDG)	: P001, LP01
Packaging Provisions (IMDG)	: PP1
IBC Instructions (IMDG)	: IBC03
Limited Quantities (IMDG)	: 5L
Excepted Quantities (IMDG)	: E1
Marine Pollutant (IMDG)	: Yes



Air transport

DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27)	: 60 L
DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75)	: 220 L
Special Provisions (IATA)	: A97, A158
Packaging Instruction (IATA)	: 964, Y964
Max Net Quantity Per Package (IATA)	: 450L
Special Provisions (IATA)	: A97, A158
Excepted Quantity (IATA)	: E1

SECTION 15: REGULATORY INFORMATION

US Federal regulations

Kerosine, petroleum (8008-20-6)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

Kerosine, petroleum, hydrodesulfurized (64742-81-0)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

Petroleum distillates, hydrotreated light (64742-47-8)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

US State regulations

Kerosine, petroleum (8008-20-6)

U.S. - Connecticut - Hazardous Air Pollutants - HLVs (30 min)
U.S. - Connecticut - Hazardous Air Pollutants - HLVs (8 hr)
U.S. - Massachusetts - Oil & Hazardous Material List - Groundwater Reportable Concentration - Reporting Category 1
U.S. - Massachusetts - Oil & Hazardous Material List - Groundwater Reportable Concentration - Reporting Category 2
U.S. - Massachusetts - Oil & Hazardous Material List - Reportable Quantity
U.S. - Massachusetts - Oil & Hazardous Material List - Soil Reportable Concentration - Reporting Category 1
U.S. - Massachusetts - Oil & Hazardous Material List - Soil Reportable Concentration - Reporting Category 2
U.S. - Massachusetts - Right To Know List
U.S. - Minnesota - Chemicals of High Concern
U.S. - New Hampshire - Regulated Toxic Air Pollutants - Ambient Air Levels (AALs) - 24-Hour
U.S. - New Hampshire - Regulated Toxic Air Pollutants - Ambient Air Levels (AALs) - Annual
U.S. - New Jersey - Discharge Prevention - List of Hazardous Substances
U.S. - New Jersey - Environmental Hazardous Substances List
U.S. - New Jersey - Right to Know Hazardous Substance List
U.S. - North Dakota - Air Pollutants - Guideline Concentrations - 8-Hour
U.S. - Pennsylvania - RTK (Right to Know) List
U.S. - Texas - Effects Screening Levels - Long Term
U.S. - Texas - Effects Screening Levels - Short Term

Kerosine, petroleum, hydrodesulfurized (64742-81-0)

U.S. - Texas - Effects Screening Levels - Long Term
U.S. - Texas - Effects Screening Levels - Short Term



Starbrite® Startron Small Engine Gas Fuel Additive

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Petroleum distillates, hydrotreated light (64742-47-8)
U.S. - New Hampshire - Regulated Toxic Air Pollutants - Ambient Air Levels (AALs) - 24-Hour
U.S. - New Hampshire - Regulated Toxic Air Pollutants - Ambient Air Levels (AALs) - Annual
U.S. - Texas - Effects Screening Levels - Long Term
U.S. - Texas - Effects Screening Levels - Short Term

Canadian regulations

Starbrite Startron Small Engine Gas Fuel Additive	
WHMIS Classification	Class B Division 3 - Combustible Liquid Class D Division 2 Subdivision B - Toxic material causing other toxic effects
 	

Kerosine, petroleum (8008-20-6)	
Listed on the Canadian DSL (Domestic Substances List) inventory.	
WHMIS Classification	Class B Division 3 - Combustible Liquid

Kerosine, petroleum, hydrodesulfurized (64742-81-0)	
Listed on the Canadian DSL (Domestic Substances List) inventory.	
WHMIS Classification	Class B Division 3 - Combustible Liquid

Petroleum distillates, hydrotreated light (64742-47-8)	
Listed on the Canadian DSL (Domestic Substances List) inventory.	
WHMIS Classification	Class B Division 3 - Combustible Liquid Class D Division 2 Subdivision B - Toxic material causing other toxic effects

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all of the information required by CPR.

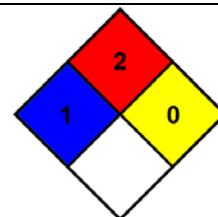
SECTION 16: OTHER INFORMATION

Indication of changes : 10/24/2013
Other information : This document has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200.

GHS Full Text Phrases:

Aquatic Chronic 2	Hazardous to the aquatic environment - Chronic Hazard Category 2
Asp. Tox. 1	Aspiration hazard Category 1
Flam. Liq. 3	Flammable liquids Category 3
Flam. Liq. 4	Flammable liquids Category 4
Skin Irrit. 2	Skin corrosion/irritation Category 2
STOT SE 3	Specific target organ toxicity (single exposure) Category 3
H226	Flammable liquid and vapour
H304	May be fatal if swallowed and enters airways
H315	Causes skin irritation
H336	May cause drowsiness or dizziness
H411	Toxic to aquatic life with long lasting effects

NFPA health hazard : 1 - Exposure could cause irritation but only minor residual injury even if no treatment is given.
NFPA fire hazard : 2 - Must be moderately heated or exposed to relatively high temperature before ignition can occur.
NFPA reactivity : 0 - Normally stable, even under fire exposure conditions, and are not reactive with water.



Party Responsible For The Preparation Of This Document:

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Safety Data Sheet

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Starbrite®

Phone Number: (954)587-6280

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.

North America GHS US 2012 & WHMIS