Emission System Cleaner

Safety Data Sheet

according to the Hazard Communication Standard (CFR29 1910.1200) HazCom 2012.

Date of issue: 07/18/2014 Revision date: 07/18/2014 Version: 1.0

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product form : Mixture

Product name : Emission System Cleaner

Product code : ESC/600 – Step 2

1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the substance/mixture : Oil additive.

1.3. Details of the supplier of the safety data sheet

Justice Brothers, Inc.
2734 Huntington Drive
Duarte, CA - USA 91010
T (626) 359-9174 (M-F, 8am-5pm)

1.4. Emergency telephone number

Emergency number : CHEMTREC International +1 (703) 527-3887 24 hr

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

GHS-US classification

Flammable Liquid 2
Acute Toxicity 3 (Inhalation)
Acute Toxicity 4 (Oral)
Acute Toxicity 4 (Dermal)
Serious Eye Irritaton 2A
Specific Target Organ Toxicity - Single Exposure 1

2.2. Label elements

GHS-US labelling

Hazard pictograms (GHS-US) :

GHS02 GHS06 GHS07 GHS08

Signal word (GHS-US) : Danger

Hazard statements (GHS-US) : Highly flammable liquid and vapor. Toxic if inhaled. Harmful if swallowed and in contact with skin. Causes serious eye irritation. Causes damage to eyes.

Precautionary statements (GHS-US) : 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. Wear protective gloves/eye protection/face protection/protective clothing. Use only outdoors or in a well- ventilated area. Wash hands thoroughly after handling. Do not eat, drink or smoke when using this product. Do not breathe dust/fume/gas/mist/vapors/spray. If exposed: Call a poison center or doctor. If on skin (or hair): Take off immediately all contaminated clothing and wash it before reuse. Rinse skin with water/shower. Call a poison center or doctor if you feel unwell. If inhaled: Remove person to fresh air and keep comfortable for breathing. Call a poison center or doctor. If swallowed: Immediately call a poison center or doctor. Rinse mouth. 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. Store in a well-ventilated place. Keep cool. Keep container tightly closed. Store locked up. Dispose of contents and container in accordance with all local, regional, national and international regulations.

2.3. Other hazards

No additional information available

2.4. Unknown acute toxicity (GHS-US)

No additional information available

SECTION 3: Composition/information on ingredients

3.1. Substance

Not applicable

3.2. Mixture

Name	Product identifier	%	GHS-US classification
Methanol	(CAS No) 67-56-1	10 - 30	Flam. Liq. 2 Acute Tox. 3 (Oral) Acute Tox. 3 (Dermal) Acute Tox. 3 (Inhalation) Eye Irrit. 2B STOT SE 1
2-Pentanol, 4-methyl-	(CAS No) 108-11-2	7 - 13	Flam. Liq. 3 Eye Irrit. 2A STOT SE 3
2,6-Di-tert-butyl-p-cresol	(CAS No) 128-37-0	5 - 10	Acute Tox. 4 (Oral)
2-Butanone	(CAS No) 78-93-3	3 - 7	Flam. Liq. 2 Eye Irrit. 2A STOT SE 3
2-Propanol	(CAS No) 107-98-2	3 - 7	Flam. Liq. 3 Eye Irrit. 2A STOT SE 3

* The exact percentage (concentration) of composition has been withheld as a trade secret in accordance with paragraph (i) of §1910.1200.

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures after inhalation : If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get immediate medical advice/attention.

First-aid measures after skin contact : In case of contact, immediately flush skin with plenty of water. Remove contaminated clothing and shoes. Wash clothing before reuse. Get medical attention if you feel unwell.

First-aid measures after eye contact : In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. If easy to do, remove contact lenses, if worn. If irritation persists, get medical attention.

First-aid measures after ingestion : If swallowed, do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Rinse mouth. Immediately call a POISON CENTER or doctor/physician.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/injuries after inhalation : Toxic if inhaled. May cause respiratory tract irritation. Vapors may cause narcosis with headache, difficulty breathing, lightheadedness, drowsiness, unconsciousness and possibly death.

Symptoms/injuries after skin contact : Harmful in contact with skin. May cause skin irritation. Symptoms may include redness, edema, drying, defatting and cracking of the skin. Other symptoms are similar to those experienced through inhalation and ingestion.

Symptoms/injuries after eye contact : Causes serious eye irritation. Symptoms may include discomfort or pain, excess blinking and tear production, with marked redness and swelling of the conjunctiva.

Symptoms/injuries after ingestion : Harmful if swallowed. May be fatal or cause blindness if swallowed. . May cause stomach distress, nausea or vomiting.

4.3. Indication of any immediate medical attention and special treatment needed

Symptoms may not appear immediately. In case of accident or if you feel unwell, seek medical advice immediately (show the label or SDS where possible).

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Treat for surrounding material.

Unsuitable extinguishing media : None known.

5.2. Special hazards arising from the substance or mixture

Fire hazard : Products of combustion may include, and are not limited to: oxides of carbon and formaldehyde.

5.3. Advice for firefighters

Protection during firefighting : Keep upwind of fire. Wear full fire fighting turn-out gear (full Bunker gear) and respiratory protection (SCBA). Cool down the containers exposed to heat with a water spray. Vapors may be heavier than air and may travel along the ground to a distant ignition source and flash back.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Use personal protection recommended in Section 8. Isolate the hazard area and deny entry to unnecessary and unprotected personnel. Eliminate sources of ignition.

6.2. Methods and material for containment and cleaning up

For containment : Contain and/or absorb spill with inert material (e.g. sand, vermiculite), then place in a suitable container. Do not flush to sewer or allow to enter waterways. Use appropriate Personal Protective Equipment (PPE).

Methods for cleaning up : Scoop up material and place in a disposal container. Provide ventilation.

6.3. Reference to other sections

See section 8 for further information on protective clothing and equipment and section 13 for advice on waste disposal.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Keep away from sources of ignition. - No smoking. Do not get in eyes, on skin, or on clothing. Do not breathe dust/fume/gas/mist/vapours/spray. Do not swallow. When using do not eat, drink or smoke. Handle and open container with care. Use only non-sparking tools. Take precautionary measures against static discharge. Use only outdoors or in a well-ventilated area.

Hygiene measures : Launder contaminated clothing before reuse. Wash hands before eating, drinking, or smoking.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Proper grounding procedures to avoid static electricity should be followed. Use explosion-proof equipment.

Storage conditions : Keep out of the reach of children. Keep container tightly closed and in a well-ventilated place. Store in a cool place. Keep away from heat, flames and sparks.

7.3. Specific end use(s)

Not available.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Methanol (67-56-1)		
USA ACGIH	ACGIH TWA (ppm)	200 ppm
USA ACGIH	ACGIH STEL (ppm)	250 ppm
USA OSHA	OSHA PEL (TWA) (mg/m³)	260 mg/m³
USA OSHA	OSHA PEL (TWA) (ppm)	200 ppm

2-Pentanol, 4-methyl- (108-11-2)		
USA ACGIH	ACGIH TWA (ppm)	25 ppm
USA ACGIH	ACGIH STEL (ppm)	40 ppm
USA OSHA	OSHA PEL (TWA) (mg/m³)	100 mg/m³
USA OSHA	OSHA PEL (TWA) (ppm)	25 ppm

2,6-Di-tert-butyl-p-cresol (128-37-0)		
USA ACGIH	ACGIH TWA (mg/m³)	2 mg/m³
USA OSHA	OSHA PEL (TWA) (mg/m³)	10 mg/m³

2-Butanone (78-93-3)		
USA ACGIH	ACGIH TWA (ppm)	200 ppm
USA ACGIH	ACGIH STEL (ppm)	300 ppm
USA OSHA	OSHA PEL (TWA) (mg/m³)	590 mg/m³
USA OSHA	OSHA PEL (TWA) (ppm)	200 ppm

2-Propanol (107-98-2)		
USA ACGIH	ACGIH TWA (ppm)	50 ppm
USA ACGIH	ACGIH STEL (ppm)	100 ppm

8.2. Exposure controls

Appropriate engineering controls	:	Use ventilation adequate to keep exposures (airborne levels of dust, fume, vapor, etc.) below recommended exposure limits.
Hand protection	:	Wear chemically resistant protective gloves.
Eye protection	:	Wear chemical safety goggles and/or face shield to prevent eye contact.
Skin and body protection	:	Wear suitable protective clothing, including appropriate boots, boot covers, overshoes, etc., as may be appropriate to prevent contact.
Respiratory protection	:	In case of insufficient ventilation, wear suitable respiratory equipment. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.
Environmental exposure controls	:	Maintain levels below Community environmental protection thresholds.
Other information	:	Do not eat, smoke or drink where material is handled, processed or stored. Wash hands carefully before eating or smoking. Handle according to established industrial hygiene and safety practices.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	:	Liquid.
Appearance	:	Two phase (on standing).
Colour	:	Milky (when mixed).
Odour	:	Hydrocarbon.
Odour threshold	:	No data available.
pH	:	No data available.
Relative evaporation rate (butylacetate=1)	:	No data available.
Melting point	:	No data available.
Freezing point	:	No data available.
Boiling point	:	77.78 °C (172 °F)
Flash point	:	11.1 °C (52 °F)
Self ignition temperature	:	No data available.
Decomposition temperature	:	No data available.
Flammability (solid, gas)	:	Flammable.
Vapour pressure	:	No data available.
Relative vapour density at 20 °C	:	No data available.
Relative density	:	0.85 g/cm^3
Solubility	:	No data available.
Log Pow	:	No data available.
Log Kow	:	No data available.
Viscosity, kinematic	:	No data available.
Viscosity, dynamic	:	No data available.
Explosive properties	:	No data available.
Oxidising properties	:	No data available.
Explosive limits	:	No data available.

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

No dangerous reaction known under conditions of normal use.

10.2. Chemical stability

Stable under normal storage conditions. May form flammable/explosive vapour-air mixture.

10.3. Possibility of hazardous reactions

No dangerous reaction known under conditions of normal use.

10.4. Conditions to avoid

Heat. Incompatible materials. Sources of ignition.

10.5. Incompatible materials

Strong oxidizing agents. Acids. Bases. Metals.

10.6. Hazardous decomposition products

May include, and are not limited to: oxides of carbon, formaldehyde.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Harmful if swallowed and in contact with skin. Toxic if inhaled.

Emission System Cleaner	
LD50 oral rat	> 300 but ≤ 2000 mg/kg (Calculated using ATE values)
LD50 dermal rabbit	> 1000 but ≤ 2000 mg/kg (Calculated using ATE values)
LC50 inhalation rat	> 2.0 but ≤ 10.0 mg/l (Calculated using ATE values)

Methanol (67-56-1)	
LD50 oral rat	5628 mg/kg
LD50 dermal rabbit	15800 mg/kg
LC50 inhalation rat	83.2 mg/l/4h

2-Pentanol, 4-methyl- (108-11-2)	
LD50 oral rat	2590 mg/kg
LD50 dermal rabbit	2870 mg/kg
LC50 inhalation rat	> 16 mg/l/4h

2,6-Di-tert-butyl-p-cresol (128-37-0)	
LD50 oral rat	890 mg/kg

2-Butanone (78-93-3)	
LD50 oral rat	2737 mg/kg
LD50 dermal rabbit	6480 mg/kg
LC50 inhalation rat	23500 mg/m^3/8h

2-Propanol (107-98-2)	
LD50 oral rat	5200 mg/kg
LD50 dermal rabbit	13000 mg/kg
LC50 inhalation rat	54.6 mg/l/4h

Skin corrosion/irritation : Based on available data, the classification criteria are not met.

Serious eye damage/irritation : Causes serious eye irritation.

Respiratory or skin sensitisation : Based on available data, the classification criteria are not met.

Germ cell mutagenicity : Based on available data, the classification criteria are not met.

Carcinogenicity : Based on available data, the classification criteria are not met.

2,6-Di-tert-butyl-p-cresol (128-37-0)	
IARC group	3 - Not classifiable

Reproductive toxicity : Based on available data, the classification criteria are not met.

Specific target organ toxicity (single exposure) : Causes damage to eyes. Inhalation, ingestion or skin absorption of methanol can cause significant disturbances in vision, including blindness.

Specific target organ toxicity (repeated exposure) : Based on available data, the classification criteria are not met.

Aspiration hazard : Based on available data, the classification criteria are not met.

Symptoms/injuries after inhalation : Toxic if inhaled. May cause respiratory tract irritation. Vapors may cause narcosis with headache, difficulty breathing, lightheadedness, drowsiness, unconsciousness and possibly death.

Symptoms/injuries after skin contact : Harmful in contact with skin. May cause skin irritation. Symptoms may include redness, edema, drying, defatting and cracking of the skin. Other symptoms are similar to those experienced through inhalation and ingestion.

Symptoms/injuries after eye contact : Causes serious eye irritation. Symptoms may include discomfort or pain, excess blinking and tear production, with marked redness and swelling of the conjunctiva.

Symptoms/injuries after ingestion : Harmful if swallowed. May be fatal or cause blindness if swallowed. . May cause stomach distress, nausea or vomiting.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : May cause long-term adverse effects in the aquatic environment.

12.2. Persistence and degradability

Emission System Cleaner	
Persistence and degradability	Not established.

12.3. Bioaccumulative potential

Emission System Cleaner	
Bioaccumulative potential	Not established.

12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

Effect on ozone layer : No additional information available

Effect on the global warming : No known ecological damage caused by this product.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste disposal recommendations : This material must be disposed of in accordance with all local, state, provincial, and federal regulations. The generation of waste should be avoided or minimized wherever possible.

SECTION 14: Transport information

In accordance with DOT

14.1. UN number

UN-No.(DOT) : 1993

14.2. UN proper shipping name

DOT Proper Shipping Name : Flammable liquids, n.o.s. (Methanol, 2-butanone)

Department of Transportation (DOT) Hazard Classes : 3

Hazard labels (DOT) :

Packing group (DOT) : II

14.3. Additional information

Other information : No supplementary information available.

Special transport precautions : Do not handle until all safety precautions have been read and understood.

SECTION 15: Regulatory information

15.1. US Federal regulations

All components of this product are listed, or excluded from listing, on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory.

Methanol (67-56-1)
Listed on SARA Section 313 (Specific toxic chemical listings)
SARA Section 313 - Emission Reporting

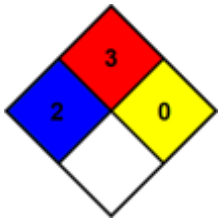
2-Butanone (78-93-3)
Listed on SARA Section 313 (Specific toxic chemical listings)
SARA Section 313 - Emission Reporting

15.2. US State regulations

No additional information available

SECTION 16: Other information

Indication of changes	:	None.
Date of issue	:	07/18/2014
Other information	:	None.
NFPA health hazard	:	2 - Intense or continued exposure could cause temporary incapacitation or possible residual injury unless prompt medical attention is given.
NFPA fire hazard	:	3 - Liquids and solids that can be ignited under almost all ambient conditions.
NFPA reactivity	:	0 - Normally stable, even under fire exposure conditions, and are not reactive with water.



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