HMS 20-07.12 Anti-Oxidant Coating

Safety Data Sheet

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

Date of issue: 08/18/2015 Revision date: 08/18/2015 Version: 1.0

SECTION 1: Identification

1.1. Product identifier

Product name : HMS 20-07.12 Anti-Oxidant Coating

Product code : Not available.

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

Use of the substance/mixture : Anti-Oxidation Coating

1.3. Details of the supplier of the safety data sheet

HITCO Carbon Composites
1600 W. 135 Street
Gardena, CA 90249 - U.S.A
T +1-310-527-0700

1.4. Emergency telephone number

Emergency number : Chemtrec 1-800-424-9300; International: (703) 527-3887

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

GHS-US and GHS-CA classification

Flammable Liquid 3

Acute Toxicity 4 (Oral)

Skin Irritation 2

Serious Eye Damage 1

Skin Sensitisation 1

Germ Cell Mutagenicity 2

Carcinogenicity 1A

Specific Target Organ Toxicity After Repeated Exposure 2

2.2. Label elements

GHS-US and GHS-CA labelling

Hazard pictograms (GHS-US/GHS-CA) :

GHS02 GHS05 GHS07 GHS08

Signal word (GHS-US/GHS-CA) : Danger

Hazard statements (GHS-US/GHS-CA)) : Flammable liquid and vapor. Harmful if swallowed. Causes skin irritation. Causes serious eye damage. May cause an allergic skin reaction. Suspected of causing genetic defects. May cause cancer. May cause damage to organs through prolonged or repeated exposure.

Precautionary statements (GHS-US/GHS-CA) : 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. Wash hands thoroughly after handling. Do not eat, drink or smoke when using this product. Contaminated work clothing must not be allowed out of the workplace. 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. Do not breathe dust/fume/gas/mist/vapors/spray. If exposed or concerned: 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 skin irritation or rash occurs: Get medical advice/attention. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a poison center/doctor. If swallowed: Call a poison center/doctor if you feel unwell. Rinse mouth. Store in a well-ventilated place. Keep cool. Store locked up. Dispose of contents/container in accordance with local/regional/national/international regulations.

2.3. Other hazards

Not applicable.

2.4. Unknown acute toxicity (GHS US)

24 percent of the mixture consists of ingredient(s) of unknown acute toxicity.

SECTION 3: Composition/information on ingredients

3.1. Substance

Not applicable.

3.2. Mixture

Name	Product identifier	%
Ethyl alcohol	(CAS No) 64-17-5	29.8
Boron	(CAS No) 7440-42-8	21.3
Isopropyl alcohol	(CAS No) 67-63-0	4.77
Phenol	(CAS No) 108-95-2	3.18
1-Pentanol	(CAS No) 71-41-0	2
Formaldehyde	(CAS No) 50-00-0	0.35
Methyl alcohol	(CAS No) 67-56-1	<0.1

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. Call a poison center/doctor/physician if you feel unwell.

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. Call a physician if irritation develops and persists.

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. Get medical attention immediately.

First-aid measures after ingestion : If swallowed, do NOT induce vomiting. Never give anything by mouth to an unconscious person. Immediately call a poison center or doctor/physician.

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

Symptoms/injuries after inhalation : May cause respiratory tract irritation.

Symptoms/injuries after skin contact : Causes skin irritation. Symptoms may include redness, edema, drying, defatting and cracking of the skin. May cause an allergic skin reaction.

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

Symptoms/injuries after ingestion : Harmful 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 : Carbon dioxide, dry chemical, alcohol foam.

Unsuitable extinguishing media : Water may be ineffective for extinguishing fire.

5.2. Special hazards arising from the substance or mixture

Fire hazard : Flammable liquid and vapor. Products of combustion may include, and are not limited to: oxides of carbon, hydrogen cyanide, formaldehyde gas.

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). Vapors may be heavier than air and may travel along the ground to a distant ignition source and flash back. Use water spray to keep fire-exposed containers cool.

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

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

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/vapors/spray. Do not swallow. Handle and open container with care. When using do not eat, drink or smoke. Take precautionary measures against static discharge. Use only non-sparking tools.

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.

Storage conditions : Keep out of the reach of children. Keep container tightly closed and in a well-ventilated place. Store locked up. Keep cool.

7.3. Specific end use(s)

Not available.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Ethyl alcohol (64-17-5)		
ACGIH	ACGIH STEL (ppm)	1000 ppm
OSHA	OSHA PEL (TWA) (mg/m³)	1900 mg/m³
OSHA	OSHA PEL (TWA) (ppm)	1000 ppm
IDLH	US IDLH (ppm)	3300 ppm (10% LEL)
NIOSH	NIOSH REL (TWA) (mg/m³)	1900 mg/m³
NIOSH	NIOSH REL (TWA) (ppm)	1000 ppm

Boron (7440-42-8)	
ACGIH	Not applicable.
OSHA	Not applicable.
IDLH	Not applicable.
NIOSH	Not applicable.

Isopropyl alcohol (67-63-0)		
ACGIH	ACGIH TWA (ppm)	200 ppm
ACGIH	ACGIH STEL (ppm)	400 ppm
OSHA	OSHA PEL (TWA) (mg/m³)	980 mg/m³
OSHA	OSHA PEL (TWA) (ppm)	400 ppm
IDLH	US IDLH (ppm)	2000 ppm (10% LEL)
NIOSH	NIOSH REL (TWA) (mg/m³)	980 mg/m³
NIOSH	NIOSH REL (TWA) (ppm)	400 ppm
NIOSH	NIOSH REL (STEL) (mg/m³)	1225 mg/m³
NIOSH	NIOSH REL (STEL) (ppm)	500 ppm

Phenol (108-95-2)		
ACGIH	ACGIH TWA (ppm)	5 ppm
OSHA	OSHA PEL (TWA) (mg/m³)	19 mg/m³
OSHA	OSHA PEL (TWA) (ppm)	5 ppm
IDLH	US IDLH (ppm)	250 ppm
NIOSH	NIOSH REL (TWA) (mg/m³)	19 mg/m³

Phenol (108-95-2)		
NIOSH	NIOSH REL (TWA) (ppm)	5 ppm
NIOSH	NIOSH REL (ceiling) (mg/m³)	60 mg/m³
NIOSH	NIOSH REL (ceiling) (ppm)	15.6 ppm

1-Pentanol (71-41-0)	
ACGIH	Not applicable.
OSHA	Not applicable.
IDLH	Not applicable.
NIOSH	Not applicable.

Formaldehyde (50-00-0)		
ACGIH	ACGIH Ceiling (ppm)	0.3 ppm
OSHA	OSHA PEL (TWA) (ppm)	0.75 ppm
OSHA	OSHA PEL (STEL) (ppm)	2 ppm (see 29 CFR 1910.1048)
IDLH	US IDLH (ppm)	20 ppm
NIOSH	NIOSH REL (TWA) (ppm)	0.016 ppm
NIOSH	NIOSH REL (ceiling) (ppm)	0.1 ppm

Methyl alcohol (67-56-1)		
ACGIH	ACGIH TWA (ppm)	200 ppm
ACGIH	ACGIH STEL (ppm)	250 ppm
OSHA	OSHA PEL (TWA) (mg/m³)	260 mg/m³
OSHA	OSHA PEL (TWA) (ppm)	200 ppm
IDLH	US IDLH (ppm)	6000 ppm
NIOSH	NIOSH REL (TWA) (mg/m³)	260 mg/m³
NIOSH	NIOSH REL (TWA) (ppm)	200 ppm
NIOSH	NIOSH REL (STEL) (mg/m³)	325 mg/m³
NIOSH	NIOSH REL (STEL) (ppm)	250 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 approved eye (properly fitted dust- or splash-proof chemical safety goggles) / face (face shield) protection.

Skin and body protection : Wear suitable protective clothing.

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 : Paint-like

Color : Brown

Odor : No data available

Odor threshold : No data available

pH : No data available

Melting point : No data available

Freezing point	:	No data available
Boiling point	:	No data available
Flash point	:	80 °F (26.7 °C)
Relative evaporation rate (water=1)	:	> 1
Flammability (solid, gas)	:	Flammable
Explosion limits	:	No data available
Explosive properties	:	No data available
Oxidizing properties	:	No data available
Vapor pressure	:	No data available
Relative density	:	1.35 - 1.4
Relative vapor density at 20 °C	:	No data available
Solubility	:	Insoluble
Partition coefficient: n-octanol/water	:	No data available
Auto-ignition temperature	:	No data available
Decomposition temperature	:	No data available
Viscosity	:	14 - 15 SEC (Zahn Cup #3)
Viscosity, kinematic	:	No data available
Viscosity, dynamic	:	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. Hazardous polymerization may occur if exposed to high temperature.

10.2. Chemical stability

Stable under normal storage conditions. May form flammable/explosive vapor-air mixture. Keep cool.

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

Oxidizers. Strong acids. Strong bases.

10.6. Hazardous decomposition products

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

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Harmful if swallowed.

HMS 20-07.12 Anti-Oxidant Coating	
LD50 oral rat	>300 but ≤2000 mg/kg
LD50 dermal rabbit	> 2000 mg/kg
LC50 inhalation rat	> 20 mg/l/4h

Ethyl alcohol (64-17-5)	
LD50 oral rat	7060 mg/kg
LC50 inhalation rat	124.7 mg/l/4h

Boron (7440-42-8)	
LD50 oral rat	650 mg/kg
LC50 inhalation rat	> 5.08 mg/l/4h

Isopropyl alcohol (67-63-0)	
LD50 oral rat	5045 mg/kg
LD50 dermal rabbit	4059 mg/kg
LC50 inhalation rat	72600 mg/m³/4h

Phenol (108-95-2)	
LD50 oral rat	340 mg/kg
LD50 dermal rabbit	630 mg/kg

1-Pentanol (71-41-0)	
LD50 oral rat	5660 µl/kg
LD50 dermal rabbit	2000 mg/kg

Formaldehyde (50-00-0)	
LD50 oral rat	100 mg/kg
LD50 dermal rabbit	270 mg/kg
LC50 inhalation rat	0.578 mg/l/4h

Methyl alcohol (67-56-1)	
LD50 oral rat	6200 mg/kg
LD50 dermal rabbit	15800 mg/kg
LC50 inhalation rat	22500 ppm/8h

Skin corrosion/irritation : Causes skin irritation.

Serious eye damage/irritation : Causes serious eye damage.

Respiratory or skin sensitization : May cause an allergic skin reaction.

Germ cell mutagenicity : Suspected of causing genetic defects.

Carcinogenicity : May cause cancer.

Ethyl alcohol (64-17-5)	
IARC group	1 - Carcinogenic to humans (in alcoholic beverages)

Isopropyl alcohol (67-63-0)	
IARC group	3 - Not classifiable

Phenol (108-95-2)	
IARC group	3 - Not classifiable

Formaldehyde (50-00-0)	
IARC group	1 - Carcinogenic to humans
National Toxicology Program (NTP) Status	2 - Known Human Carcinogens
In OSHA Specifically Regulated Carcinogen list	Yes

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

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

Specific target organ toxicity (repeated exposure) : May cause damage to organs through prolonged or repeated exposure.

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

Symptoms/injuries after inhalation : May cause respiratory tract irritation.

Symptoms/injuries after skin contact : Causes skin irritation. Symptoms may include redness, edema, drying, defatting and cracking of the skin. May cause an allergic skin reaction.

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

Symptoms/injuries after ingestion : Harmful 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

HMS 20-07.12 Anti-Oxidant Coating	
Persistence and degradability	Not established.

12.3. Bioaccumulative potential

HMS 20-07.12 Anti-Oxidant Coating	
Bioaccumulative potential	Not established.

12.4. Mobility in soil

No additional information available.

12.5. Other adverse effects

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.

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

SECTION 14: Transport information

Department of Transportation (DOT) / Transportation of Dangerous Goods (TDG)

In accordance with DOT and TDG

UN-No. (DOT and TDG) : UN1139

Proper Shipping Name (DOT and TDG) : Coating solution

Transport hazard class(es) (DOT and TDG) : 3

Hazard labels (DOT and TDG) :

Packing group (DOT and TDG) : III

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. 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

Isopropyl alcohol (67-63-0)	
Subject to reporting requirements of United States SARA Section 313	
EPA TSCA Regulatory Flag	T - T - indicates a substance that is the subject of a Section 4 test rule under TSCA.
SARA Section 313 - Emission Reporting	1.0 % (only if manufactured by the strong acid process, no supplier notification)

Phenol (108-95-2)	
Listed on the United States SARA Section 302 Subject to reporting requirements of United States SARA Section 313	
EPA TSCA Regulatory Flag	T - T - indicates a substance that is the subject of a Section 4 test rule under TSCA.
SARA Section 302 Threshold Planning Quantity (TPQ)	≤ 10000
SARA Section 313 - Emission Reporting	1.0 %

Formaldehyde (50-00-0)	
Listed on the United States SARA Section 302 Subject to reporting requirements of United States SARA Section 313	
SARA Section 302 Threshold Planning Quantity (TPQ)	500
SARA Section 313 - Emission Reporting	0.1 %

Methyl alcohol (67-56-1)	
Subject to reporting requirements of United States SARA Section 313	
SARA Section 313 - Emission Reporting	1.0 %

Ethyl alcohol (64-17-5)
Listed on the Canadian DSL (Domestic Sustances List)

Boron (7440-42-8)
Listed on the Canadian DSL (Domestic Sustances List)

Isopropyl alcohol (67-63-0)
Listed on the Canadian DSL (Domestic Sustances List)

Phenol (108-95-2)
Listed on the Canadian DSL (Domestic Sustances List)

1-Pentanol (71-41-0)
Listed on the Canadian DSL (Domestic Sustances List)

Formaldehyde (50-00-0)
Listed on the Canadian DSL (Domestic Sustances List)

Methyl alcohol (67-56-1)
Listed on the Canadian DSL (Domestic Sustances List)

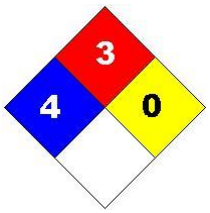
15.3. US State regulations

HMS 20-07.12 Anti-Oxidant Coating	
State or local regulations	This product contains chemicals known to the State of California to cause cancer.

SECTION 16: Other information

Date of issue : 08/18/2015
Revision date : 08/18/2015
Other information : None.

Mexico Classification:



Blue = Health **Red = Flammability** **Yellow = Reactivity** **White = Special**
Hazard Rating: 0 = minimal, 1 = slight, 2 = moderate, 3 = severe, 4 = extreme

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