MATERIAL SAFETY DATA SHEET

Manufacturer:	Schaeffer Mfg. Company	**Emergency Response Number:**	
Address:	102 Barton Street	**314-865-4105 (24-hr Emergency Response**	
Address	St. Louis, MO 63104	**Number) or 800-325-9962**	

SECTION 1 – PRODUCT INFORMATION

Chemical Family: Petroleum Hydrocarbons and Additives	**Trade Name: #300ULSW Arctic Shield Ultra Low Sulfur Winter Concentrate**

Formula: Proprietary Mixture

SECTION 2 – HAZARDOUS INGREDIENTS

COMPONENTS-CHEMICAL NAMES AND COMMON NAMES	CAS Number	%	Exposure Limits			
			TVL		PEL	
			ppm	mg/m^3	ppm	mg/m^3
Petroleum Distillates	64742-47-8	0-50		200		
Xylene	1330-20-7	4.4-9	100	434	100	435
Light Ends of Polyethylenebenzene Residue	178535-25-6	14-27	NE		NE	
Ethylbenzene	100-41-4	0.92-7	100	434	100	435
2-Butoxyethanol	111-76-2	6-9	NE		NE	
Light Aromatic Naphtha	64742-95-6	2.2 -50	50		NE	
Heavy Aromatic Naphtha	64742-94-5	0.44-2.2	50		NE	
Naphthalene	91-20-3	0.48-2.6	25		25	
1,2,4 Trimethylbenzene	95-63-6	0.44-2.2	25	123	25	125
Vinyl Acetate Monomer	108-05-4	0.044– 0.44	NE		NE	
Benzene	71-43-2	0-9.6	0.5		1	
Residues (Petroleum) Steam Cracked	68513-69-5	0-48		5		5
Toluene	108-88-3	0-4.32	50		200	
Styrene	100-42-5	0-3.36	20	85	100	

Section 3 – PHYSICAL DATA

Boiling Point:	190°F/87.78°C	**Specific Gravity:**	0.8916-0.9175
Vapor Pressure (mm, Hg):	Not Determined	**% Volatile:**	>75
Vapor Density (Air = 1):	Not Determined	**Evaporation Rate: (=1)**	Not Determined
Solubility in Water:	Disperses	**pH:**	Not Applicable

Appearance and Odor: Dark color, strong aromatic solvent odor.

SECTION 4 - FIRE AND EXPLOSION HAZARD DATA

Flash Point (Method) °F/°C: 88°-º120 F/31°-49ºC PMCC | **Flammability Limits UEL & LEL** ----Not Determined

Extinguishing Media: Carbon dioxide foam, dry chemical foam, sand, earth, waterfog.

Special Fire Fighting Procedures: Use air-supplied breathing apparatus for enclosed areas. Cool exposed containers with water spray. Avoid breathing fumes.

Unusual Fire & Explosion Hazards: Vapors may be heavier than air and travel along the ground to a distant ignition source and flash back. Containers may rupture upon heating

SECTION 5 - REACTIVITY HAZARD DATA

STABILITY [**X**] STABLE [ ]UNSTABLE | **Hazardous Decomposition** [ ] WILL [**X**] WILL NOT OCCUR

Conditions to Avoid: High heat, high energy ignition sources

Incompatibility (Mat. to avoid): Strong oxidizing agents, amines, phenols, halogen compounds.

Hazardous Decomposition Products: Oxides of carbon and nitrogen. By products of incomplete combustion

Conditions to Avoid: None

SECTION 6 – HEALTH HAZARD DATA

Threshold Limit Value and Sources: None established.

Acute Effects of Overexposure:

Ingestion: Harmful if swallowed**.** Irritation of the gastrointestinal lining, nausea, vomiting, diarrhea and abdominal pain. May also cause central nervous system depression. Aspiration if swallowed. Can enter lungs and cause damage

Eye Contact: Liquid contact produces severe irritation to the eyes.

Skin Contact: Prolonged and repeated contact with the skin can cause severe irritation and redness to skin. Product can be absorbed through the skin.

Inhalation: Toxic by Inhalation**.** Inhalation of vapors can cause headache, dizziness, nausea, central nervous system depression.

CHRONIC EFFECTS OF OVEREXPOSURE: Contains materials which may cause damage to the following organs: blood, kidneys, liver, gastrointestinal tract, upper respiratory tract, skin, central nervous system, eye lens or cornea. Contains materials which may cause cancer. Risk of cancer depends upon duration and level of exposure. Pre-existing disorders involving target organs mentioned as being at risk may be aggravated by over-exposure to this product

Emergency and First Aid Procedures:

Swallowing: Wash out mouth with water and then drink 2-4 cups of water. Do not induce vomiting. Seek medical attention immediately. Never give anything by mouth to an unconscious person.

Skin: Wash skin thoroughly with soap and water. Flush skin for at least 15 minutes. Launder contaminated clothing. Throw away product soaked shoes

Inhalation: Remove victim to fresh air. If breathing is labored, administer oxygen by trained personnel. If breathing has stopped start artificial respiration immediately by trained personnel. Seek medical attention immediately if breathing difficulties continue

Eyes; Check for and remove any contact lenses. Flush eyes with plenty of clear, cool, clean water for 15 minutes occasionally lifting the upper and lower eyelids. Seek medical attention immediately

SECTION 7 – SPILL OR LEAK PROCEDURES
Environmental Impact: Toxic to aquatic organisms, may cause long term adverse effects in the aquatic environment. If spilled into a watercourse, call the United States Coast Guard Toll Free No. 800-424-8802. If spilled report spill immediately to all applicable Federal, State and Local agencies and authorities.
Procedures To Be Taken If Material Is Released or Spilled: Stop leak if without risk. Dike spill. Eliminate all sources of ignition. Absorb spills with sawdust, sand, earth, oil dry, vermiculite, or other absorbent materials. Ventilate confined spaces. Keep out of sewers and watercourses. Use spark proof and explosion proof equipment. Inform relevant authorities if the product has caused environmental pollution (sewers, waterways, soil, and air). Wear appropriate personal protective equipment when cleaning up spill. Wear appropriate respirator when ventilation is inadequate.
Waste Disposal Method: Dispose of waste material with a licensed waste disposal contractor in accordance with all applicable federal, state and local laws and regulations. This product is considered to be an RCRA hazardous waste due to its flammability D001, the presence of Benzene 71-43-2

SECTION 8 – SPECIAL PROTECTION INFORMATION
Respiratory Protection: Use NIOSH/MSHA approved full-face respirator with an organic vapor cartridge if the recommend exposure limits are exceeded
Ventilation: Local exhaust to keep vapors below exposure limits
Eye Protection: : Chemical resistant Goggles or full face shield.
Protective Clothing: Long sleeve shirt is recommended. Wear either a chemical protective suit or apron when potential for contact with material exists. Use neoprene and nitrile rubber boots when necessary to avoid contaminating shoes. Wear impervious nitrile or neoprene gloves.
SECTION 9 – SPECIAL PRECAUTIONS
Precautions To Be Taken In Handling and Storage: Do not store near heat, spark, flame or strong oxidizers. Keep containers closed when not in use. Keep containers closed when not in use. Adequate ventilation required. Electrostatic charge may accumulate and create a hazardous condition when handling this material. To minimize this hazard, bonding and grounding may be necessary but may not, by themselves, be sufficient. Review all operations which have the potential of generating an accumulation of electrostatic charge and/or a flammable atmosphere (including tank and container filling, splash filling, tank cleaning, sampling, gauging, switch loading, filtering, mixing and vacuum truck operations) and use appropriate mitigating procedures..
Special Comments: This product is a flammable liquid. Avoid breathing vapors. Avoid prolonged or repeated skin contact. Remove contaminated shoes and clothing. Throw away shoes. Launder clothing before reuse. Wash thoroughly with soap and water after use and before eating, drinking, smoking, and using toilet facilities. Empty containers retain product residue and can be hazardous. Do not reuse containers. To avoid fire or explosion dissipate static electricity during transferring by grounding and bonding containers and equipment before transferring material. Do not store in unlabeled or unmarked containers.
SECTION 10 – ADDITIONAL HEALTH AND TOXICOLOGICAL DATA

HMIS & NFPA Ratings: Health = 2 Fire = 2 Reactivity = 0

All of the components in this material are on the US TSCA Inventory and are in compliance with the Canadian Environmental Protection Act and are listed on the Dangerous Substances List.

This product contains 0.48-2.6% Naphthalene CAS #91-20-3, 0.92-7% Ethylbenzene CAS #100-41-4 ,0.044-0.44% Vinyl Acetate Monomer CAS #108-05-4 , 0-9.6% Benzene CAS 71-43-2 and 0-4.32% Toluene CAS #108-88-3 which are found on the National Toxicology Programs Annual list, IRAC's Monographs and OSHA's Subpart Z list as a potential cancer causing chemical.

This product contains 0.48-2.6% Naphthalene CAS #91-20-3, 0.92-7% Ethylbenzene CAS #100-41-4 ,0.044-0.44% Vinyl Acetate Monomer CAS #108-05-4 , 0-9.6% Benzene CAS 71-43-2 and 0-4.32% Toluene CAS #108-88-3, which have been found by the State of California to be possible cancer causing and/or reproductive toxins.

Acute Toxicity:

Xylene
LD50 Dermal - 4320mg/kg in rabbits
LD50 Oral - 4300 mg/kg in rats
LC50 Inhalation – 5000 rpm in rats 1 hour exposure time

Light Aromatic Solvent Naphtha
LD50 Oral – 8,400mg/kg in rats

1,2,4,-Trimethylbenzene
LD50 Oral -5g/kg in rats

Naphthalene
LD50 dermal - >2500mg/kg in rats
LD50 Oral – 490mg/kg in rats
LC50 Inhalation - >340mg/m^3 in rats 1 hour exposure time

SECTION 10 – ADDITIONAL HEALTH AND TOXICOLOGICAL DATA Continued

Acute Toxicity:

Heavy Aromatic Naphtha
LD50 Dermal - >2000mg/kg in rabbits
LD50 Oral - >2000mg/kg in rats

Kerosene
LD50 Dermal - >2000mg/kg in rabbits
LD50 Oral - >5000mg/kg in rats

Ethylbenzene
LD50 Dermal - >5000mg/kg in rabbits
LD50 Oral – 3500mg/kg in rats

Acute Toxicity

Vinyl Acetate
LD50 Dermal – 2335mg/kg in rabbits
LD50 Oral – 2900mg/kg in rats

Petroleum Distillates
LD50 Dermal – >2g/kg in rabbits
LD50 Oral – >6g/kg in rats
LC50 - >1400ppm in rats 4 hour exposure time

See next page for SARA Title III Information

Section 11 Transportation Information

US DOT

24 pints per case and 4X1-gallon cases: ORM-D Consumer Commodity

2X2 1/2 gallon cases, 5 gallon pails: UN1993, Flammable Liquids, N.O.S.,(Petroleum Distillates, Light Aromatic Petroleum Naphtha, Heavy Aromatic Naphtha, Xylene,2-Butoxyethanol), 3, PGIII

30 and 55 gallon drums: UN1993, Flammable Liquids, N.O.S.,(Petroleum Distillates, Light Aromatic Petroleum Naphtha, Heavy Aromatic Naphtha,Xylene,2-Butoxyethanol), 3, PGIII,RQ(Benzene)

275 gallon Interrmediate Bulk Tote: UN1993, Flammable Liquids,(Petroleum Distillates, Light Aromatic Petroleum Naphtha, Heavy Aromatic Naphtha, Xylene, 2-Butoxyethanol),), 3, PGIII, RQ,(Benzene, Xylene)

Bulk >1,000 gallons : UN1993, Flammable Liquids,(Petroleum Distillates, Light Aromatic Petroleum Naphtha, Heavy Aromatic Naphtha, Xylene, 2-Butoxyethanol), 3, PGIII, RQ, (Benzene ,Xylene, Naphthalene, Ethylbenzene, Toluene)

IATA – DGR : UN1993, Flammable Liquids,(Petroleum Distillates, Light Aromatic Petroleum Naphtha, Heavy Aromatic Naphtha, Xylene, -2Butoxyethanol),3,PGIII, RQ (Benzene) (24 pint cases and 4X1 gallon cases can not be shipped by air)

IMDG: 5 gallon pails,: UN1993, Flammable Liquids,(Petroleum Distillates, Light Aromatic Petroleum Naphtha, Heavy Aromatic Naphtha, Xylene, 2-Butoxyethanol),3,PGIII, Flash Point 31°-49°C, PMCC
30 and 55 gallon drums: UN1993, Flammable Liquids,(Petroleum Distillates, Light Aromatic Petroleum Naphtha, Heavy Aromatic Naphtha, Xylene, 2-Butoxyethanol),3,PGIII, RQ, (Benzene),Flash Point 31°-49°C, PMCC

275 gallon Intermediate Bulk Tote : UN1993, Flammable Liquids,(Petroleum Distillates, Light Aromatic Petroleum Naphtha, Heavy Aromatic Naphtha, Xylene, 2-Butoxyethanol),3,PGIII, RQ, (Benzene, Xylene),Flash Point 31°-49°C, PMCC

SARA Title III Information

Section 302/304 Extremely Hazardous

Component	CAS#	%	RQ lbs.	RQ gal*
Vinyl Acetate Monomer	108-05-4	0.044-0.44	5000	148,699
Benzene	71-43-2	0-9.6	10	14

CERCLA Section 102 (a) & 302.4 Hazardous Substance & Section 313 Toxic Chemical

Component	CAS#	%	RQ lbs.	RQ gals*
Ethylbenzene	100-41-4	0.92-7	1000	1,685
Xylene	1330-20-7	4.4-9	100	145
2-Butoxyethanol	111-76-2	6-9	NE	NE
1,2,4 Trimethylbenzene	95-63-6	0.48-2.2	NE	NE
Naphthalene	91-20-3	0.48-2.6	100	935
Vinyl Acetate Monomer	108-05-4	0.044-0.44	5000	148,699
Benzene	71-43-2	0-9.6	10	14
Toluene	108-88-3	0-4.32	1000	3,044

*Product RQ for Stationary Source to release Regulatory Requirement RQ as specified by CERCLA

Title III Section 311 Hazard Categorization

Acute	Chronic	Fire	Pressure	Reactivity
X	X	X		

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