

Material Safety Data Sheet

Surfatron® DT-78

1. PRODUCT AND COMPANY IDENTIFICATION

Product name	Surfatron® DT-78
Product use	Surfactant
Manufacturer	Champion Technologies, Inc. P.O. Box 450499 Houston, TX, 77245 USA
Telephone	1-281-431-2561 (Champion)
In case of emergency	1-800-424-9300 (CHEMTREC) 1-703-527-3887 (CHEMTREC - International)

2. HAZARDS IDENTIFICATION

Physical state	liquid
Color	colorless.
Emergency overview	DANGER! Flammable. Harmful. Irritant. Keep away from heat, sparks and flame. Contains material which may cause cancer. See toxicological information (section 11)

Potential health effects

Inhalation	Harmful by inhalation. Possible risk of irreversible effects.
Ingestion	Possible risk of irreversible effects. Irritating to mouth, throat and stomach.
Skin	Harmful in contact with skin. Possible risk of irreversible effects. Irritating to skin.
Eyes	Irritating to eyes.
Chronic effects	No known significant effects or critical hazards.

See toxicological information (section 11)

3. COMPOSITION/INFORMATION ON INGREDIENTS

<u>Name</u>	<u>CAS no.</u>	<u>wt. %</u>
Isopropyl Alcohol	67-63-0	10 - 30
Methanol	67-56-1	10 - 30
Xylene	1330-20-7	10 - 30
Ethylbenzene	100-41-4	1 - 5

4. FIRST AID MEASURES

Eye contact	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention.
Skin contact	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Continue to rinse for at least 10 minutes. Get medical attention.
Inhalation	Move exposed person to fresh air. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Get medical attention. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway.
Ingestion	Wash out mouth with water. If material has been swallowed and the exposed person is

conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention. Never give anything by mouth to an unconscious person.

Protection of first-aiders No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

Notes to physician No specific treatment. Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

5. FIRE-FIGHTING MEASURES

Flash point 53 °F (11.7 °C), Pensky-Martens. Closed cup

Flammability of the product Highly flammable liquid. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. Runoff to sewer may create fire or explosion hazard.

Extinguishing media

Suitable Use dry chemical, CO₂, water spray (fog) or foam.

Not suitable Do not use water jet.

Special exposure hazards Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool. This material is harmful to aquatic organisms. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.

Hazardous combustion products carbon dioxide, carbon monoxide

Special protective equipment for fire-fighters Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Special remarks on fire hazards Not available.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see section 8).

Environmental precautions Avoid contact of spilled material with soil and prevent runoff entering surface waterways. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Methods for cleaning up

Small spill Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble or absorb with an inert dry material and place in an appropriate waste disposal container. Use spark-proof tools and explosion-proof equipment. Dispose of via a licensed waste disposal contractor.

Large spill Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Contain and collect

spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see section 13). Use spark-proof tools and explosion-proof equipment. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see section 1 for emergency contact information and section 13 for waste disposal.

7. HANDLING AND STORAGE

Handling	Use only with adequate ventilation. Put on appropriate personal protective equipment (see section 8). Wear appropriate respirator when ventilation is inadequate. Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Avoid contact with eyes, skin and clothing. Avoid breathing vapor or mist. Do not enter storage areas and confined spaces unless adequately ventilated. Eliminate all ignition sources. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. To avoid fire or explosion, dissipate static electricity during transfer by grounding and bonding containers and equipment before transferring material. Empty containers retain product residue and can be hazardous. Do not reuse container. Workers should wash hands and face before eating, drinking and smoking.
Storage	Store in accordance with local regulations. Store in a segregated and approved area. Keep container in a well-ventilated area. Store in the original container or an approved alternative made from a compatible material. Keep tightly closed when not in use. Separate from oxidizing materials. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Personal protection

Hands	Use chemical-resistant, impervious gloves.
Eyes	Safety eyewear should be used when there is a likelihood of exposure.
Body	Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
Respiratory	If during normal use the material presents a respiratory hazard, use only with adequate ventilation or wear appropriate respirator. 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.

Occupational exposure limits

<u>Component</u>	<u>Source</u>	<u>Type</u>	<u>PPM</u>	<u>MG/M3</u>	<u>Notes</u>
Isopropyl Alcohol	OSHA PEL	TWA	400 ppm	980 mg/m3	
	NIOSH REL	TWA	400 ppm	980 mg/m3	
	NIOSH REL	STEL	500 ppm	1,225 mg/m3	
	ACGIH TLV	TWA	200 ppm		
	ACGIH TLV	STEL	400 ppm		
Methanol	OSHA PEL	TWA	200 ppm	260 mg/m3	
	NIOSH REL	TWA	200 ppm	260 mg/m3	SKIN
	NIOSH REL	STEL	250 ppm	325 mg/m3	SKIN
	ACGIH TLV	TWA	200 ppm	262 mg/m3	SKIN
	ACGIH TLV	STEL	250 ppm	328 mg/m3	SKIN
Xylene	OSHA PEL	TWA	100 ppm	435 mg/m3	
	ACGIH TLV	TWA	100 ppm	434 mg/m3	
	ACGIH TLV	STEL	150 ppm	651 mg/m3	
Ethylbenzene	OSHA PEL	TWA	100 ppm	435 mg/m3	

NIOSH REL	TWA	100 ppm	435 mg/m3
NIOSH REL	STEL	125 ppm	545 mg/m3
ACGIH TLV	TWA	100 ppm	
ACGIH TLV	STEL	125 ppm	

SKIN - Skin absorption can contribute significantly to overall exposure.

Engineering measures	Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.
Hygiene measures	Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Wash contaminated clothing before reusing. Emergency baths, showers, or other equipment appropriate for the potential level of exposure should be located close to the workstation location.
Environmental exposure controls	Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state	liquid
Color	colorless.
Odor	Not available.
Odor threshold	Not available.
Boiling/condensation point	Not available.
Pour point	-40 °F (-40.0 °C)
Flash point	53 °F (11.7 °C), Pensky-Martens. Closed cup
Flammable limits	Lower: Not available. Upper: Not available.
Auto-ignition temperature	Not available.
pH	Not available.
Evaporation rate	Not available.
Solubility	oil
Vapor density	Not available.
Relative density	0.8209 @ 75 °F (23.9 °C)
Vapor pressure	Not available.
Viscosity	Dynamic: 2 - 5 cPs @ 75 °F (23.9 °C)
Octanol/water partition coefficient (LogPow)	Not available.

Note: Typical values only - not to be interpreted as sales specifications

10. STABILITY AND REACTIVITY

Stability	The product is stable.
Hazardous polymerization	Under normal conditions of storage and use, hazardous polymerization will not occur.

Conditions to avoid	Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition.
Materials to avoid	oxidizing materials
Hazardous decomposition products	Under normal conditions of storage and use, hazardous decomposition products should not be produced.

11. TOXICOLOGICAL INFORMATION

Acute toxicity

<u>Substance</u>	<u>Test type</u>	<u>Species</u>	<u>Dose</u>	<u>Exposure</u>
Isopropyl Alcohol	LD50 Oral	Mouse	3,600 mg/kg	-
	LD50 Oral	Rat	5,000 mg/kg	-
	LD50 Oral	Rabbit	6,410 mg/kg	-
	LC50 inhalation	Rat	72,600 mg/m3	-
	LD50 Dermal	Rabbit	12,800 mg/kg	-
Methanol	LD50 Oral	Rat	5,600 mg/kg	-
	LD50 Oral	Mouse	5,800 mg/kg	-
	LD50 Oral	Rabbit	14,200 mg/kg	-
	LC50 inhalation	Mouse	41000 ppm	14 h
	LC50 inhalation	Rat	64000 ppm	4 h
	LC50 inhalation	Rabbit	81,000 mg/m3	4 h
	LD50 Dermal	Rabbit	15,800 mg/kg	-
Xylene	LD50 Oral	Mouse	2,119 mg/kg	-
	LD50 Oral	Rat	4,300 mg/kg	-
	LC50 inhalation	Rat	5000 ppm	4 h
	LD50 Dermal	Rabbit	1,700 mg/kg	-
Ethylbenzene	LD50 Oral	Rat	3,500 mg/kg	-
	LC50 inhalation	Mouse	35,500 mg/m3	2 h
	LC50 inhalation	Rat	55,000 mg/m3	2 h
	LD50 Dermal	Rabbit	3,500 mg/kg	-

Conclusion/Summary Not available.

Chronic toxicity

Conclusion/Summary Not available.

Irritation/Corrosion

Conclusion/Summary

Skin Not available.

Eyes Not available.

Respiratory Not available.

Sensitizer

Conclusion/Summary

Skin Not available.

Respiratory Not available.

Target organ effects Methanol: Ingestion may cause blindness.

Carcinogenicity

Conclusion/Summary Not available.

<u>Component</u>	<u>IARC</u>	<u>NTP</u>	<u>OSHA</u>
Ethylbenzene	2B		
2B	- IARC Group 2B, possibly carcinogenic to humans		

Mutagenicity

Conclusion/Summary Not available.

Teratogenicity

Conclusion/Summary Not available.

Reproductive toxicity

Conclusion/Summary Not available.

12. ECOLOGICAL INFORMATION

Environmental effects Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Aquatic ecotoxicity

Conclusion/Summary Not available.

Other adverse effects No known significant effects or critical hazards.

13. DISPOSAL CONSIDERATIONS

Waste disposal The generation of waste should be avoided or minimized wherever possible. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe way. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Disposal should be in accordance with applicable regional, national and local laws and regulations. Refer to Section 7: HANDLING AND STORAGE and Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for additional handling information and protection of employees.

14. TRANSPORT INFORMATION

Refer to the bill of lading or container label for DOT or other transportation hazard classification. Additionally, be aware that shipping descriptions may vary based on mode of transport, shipment volume or weight, container size or type, and/or origin and destination. Consult your company's Hazardous Materials / Dangerous Goods expert or your legal counsel for information specific to your situation.

15. REGULATORY INFORMATION

HCS Classification

<u>Component</u>	<u>Classification</u>
Isopropyl Alcohol	Irritant., Occupational exposure limits
Methanol	Irritant., Target organ effects, Occupational exposure limits
Xylene	Harmful., Irritant., Occupational exposure limits
Ethylbenzene	Carcinogen, Harmful., Occupational exposure limits

U.S. Federal regulations

CERCLA - Reportable quantity:

SUBSTANCE	REPORTABLE QUANTITY
Methanol	5000 lbs
Xylene	100 lbs
Ethylbenzene	1000 lbs

SUBSTANCE	PRODUCT REPORTABLE QUANTITY
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Xylene 470 lb, 69 gal US

Product spills equal to or exceeding the threshold above trigger the reporting requirements under CERCLA for the listed hazardous substance. Report the spill or release to the National Response Center (NRC) at (800) 424-8802.

SARA Title III Section 302 Extremely hazardous substances (40 CFR Part 355):

None of the components are listed.

SARA CERCLA: Hazardous substances:

None of the components are listed.

SARA 311/312 MSDS distribution - chemical inventory - hazard identification:

Immediate (acute) health hazard, Delayed (chronic) health hazard, Fire hazard

Clean Water Act (CWA) 307:

The following components are listed: Ethylbenzene. Toluene. Benzene.

Clean Water Act (CWA) 311:

The following components are listed: Xylene. Ethylbenzene. Toluene. Benzene.

Clean Air Act (CAA) 112 accidental release prevention:

None of the components are listed.

Clean Air Act (CAA) 112 regulated flammable substances:

None of the components are listed.

Clean Air Act (CAA) 112 regulated toxic substances:

None of the components are listed.

SARA 313 - Supplier notification

<u>Component</u>	<u>CAS no.</u>	<u>wt. %</u>
Isopropyl Alcohol	67-63-0	10 - 30
Methanol	67-56-1	10 - 30
Xylene	1330-20-7	10 - 30
Ethylbenzene	100-41-4	1 - 5

State regulations

Massachusetts Substances: The following components are listed: Isopropyl Alcohol. Methanol. Xylene. Ethylbenzene.

New Jersey Hazardous Substances: The following components are listed: Ethylbenzene. Xylene. Methanol. Isopropyl Alcohol.

Pennsylvania RTK Hazardous Substances: The following components are listed: Ethylbenzene. Xylene. Isopropyl Alcohol. Methanol.

California Prop. 65

WARNING: This product contains a chemical known to the State of California to cause cancer.

WARNING: This product contains less than 1% of a chemical known to the State of California to cause birth defects or other reproductive harm.

<u>Component</u>	<u>Cancer</u>	<u>Reproductive</u>	<u>No significant risk level</u>	<u>Maximum acceptable dosage level</u>
Ethylbenzene	Yes.	No.	No.	No.
Toluene	No.	Yes.	No.	13000 µg/day
	No.	Yes.	No.	7000 µg/day
Benzene	Yes.	Yes.	6.4 µg/day	No.
	Yes.	Yes.	No.	24 µg/day
	Yes.	Yes.	No.	49 µg/day
	Yes.	Yes.	13 µg/day	No.

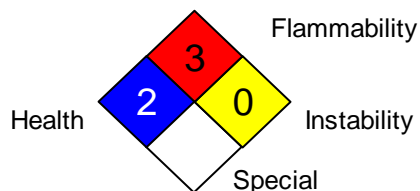
International regulations

United States inventory (TSCA 8b): All components are listed or exempted.

Canada inventory (DSL): All components are listed or exempted.

16. OTHER INFORMATION

National Fire Protection Association (U.S.A.):



Date of issue	07/16/2009
Date of previous issue	04/09/2007
Version	3.0
Prepared by	Product Stewardship

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