

MATERIAL SAFETY DATA SHEET

Version: 1.1

Date:
03/10/2010



1. PRODUCT AND COMPANY IDENTIFICATION

Affresh Dishwasher and Disposal Cleaner

Product Information: Affresh Dishwasher and Disposal Cleaner

Company Identification:

WHIRLPOOL CORPORATION
145 W. Main St.
Benton Harbor, MI, USA
1-800-643-0961 (US), 1-888-253-2669 (Canada)



Emergency Telephone Number:

Chemtrec:
1-800-424-9300 (Chemtrec - US)
1-703-527-3887 (International)

2. HAZARDS IDENTIFICATION

Emergency Overview

May cause skin or eye irritation after repeated or prolonged contact. The health hazards of this product should be low under normal industrial and commercial uses.

HFRP Rating

Health	2
Flammability	0
Reactivity	1
Personal protection	E

Eye

Irritating to eyes.

Inhalation

Dust in high concentrations may irritate the respiratory system. Under normal conditions of intended use, this material is not expected to be an inhalation hazard.

Skin

Prolonged or repeated skin contact may cause irritation.

Ingestion

No information about adverse effects due to exposure. May cause chemical burns in mouth and throat. Expected to be a low ingestion hazard.

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3. COMPOSITION / INFORMATION ON INGREDIENTS

Product name	CAS Number	Amount
1,2,3-Propanetricarboxylic acid, 2-hydroxy-	77-92-9	>= 10.0 %
Ethanedioic acid	6153-56-6	<= 3.0 %

4. FIRST AID MEASURES

Eye	Immediately flush with plenty of water for up to 15 minutes. Remove any contact lenses and open eyes wide apart. Flush thoroughly with water. If irritation occurs, get medical assistance.
Inhalation	Under normal conditions of intended use, this material is not expected to be an inhalation hazard. In case of inhalation of spray mist: Move person into fresh air and keep at rest. When breathing is difficult, properly trained personnel may assist affected person by administering 100% oxygen. Get medical attention if any discomfort continues.
Skin	Wash skin thoroughly with soap and water for several minutes. Immediately remove contaminated clothing. Get medical attention if any discomfort continues.
Ingestion	Give one or two glasses of water if patient is alert and able to swallow. Seek immediate medical attention. Do not induce vomiting. Never give liquid to an unconscious person.

5. FIRE-FIGHTING MEASURES

Flammable Properties

Flash Point > 100 °C

Fire Fighting Media Use water fog, alcohol-resistant foam, dry chemical or carbon dioxide (CO₂) to extinguish flames.

Fire Fighting Instructions Use standard firefighting procedures and consider the hazards of other involved materials. Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA.

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Unusual Fire & Explosion Hazards

No unusual fire or explosion hazards noted. Decomposition may produce fumes, smoke, oxides of carbon and hydrocarbons.

6. ACCIDENTAL RELEASE MEASURES

Safety Advice

Adequate ventilation should be provided so that exposure limits are not exceeded. Ensure suitable personal protection (including respiratory protection) during removal of spillages in a confined area. Wear appropriate personal protective equipment.

Spill Cleanup Methods

Shovel into dry containers. Cover and move the containers. Flush the area with water. Ensure that waste and contaminated materials are collected and removed from the work area as soon as possible in a suitably labeled container. All waste materials should be packaged, labeled and transported in accordance with all national, state/provincial, and local requirements. Pick up with vacuum or absorbent solid, store in closed container for disposal.

7. HANDLING AND STORAGE

Handling

No specific hygiene procedures noted, but good personal hygiene practices are always advisable, especially when working with chemicals. Wash promptly with soap and water if skin becomes contaminated. Practice good housekeeping. Provide adequate ventilation if fumes or vapors are generated. Avoid prolonged contact with skin or eyes. Avoid forming spray/aerosol mists. Ventilate well, avoid breathing vapors. Use approved respirator if air contamination is above accepted level. In case of inadequate ventilation, use respiratory protection.

Handling / Physical Hazards

Avoid extreme temperatures.

Storage Precautions

Store in a cool, dry place with adequate ventilation. Keep away from incompatible materials, open flames, and high temperatures. Keep containers tightly closed.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering Controls

No special requirements under ordinary conditions of use and with adequate ventilation. Provide easy access to water supply or an emergency shower.

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Eye protection

Wear necessary protective equipment. Avoid contact with eyes and prolonged skin contact. Where contact with this material is likely, chemical goggles are recommended.

Skin and Body Protection

Wash promptly with soap and water if skin becomes contaminated. When prolonged or frequently repeated contact could occur, use protective clothing impervious to this material.

Personal protection

Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

Respiratory Protection

No protection is ordinarily required under normal conditions of use and with adequate ventilation. Respiratory protection must be used if air contamination exceeds acceptable level.

Exposure Limit Values

Component	Regulatory Basis	Type	Occupational exposure limits
Ethanedioic acid	OSHA_TRANS	PEL	1 mg/m3
	ACGIH	STEL	2 mg/m3
	ACGIH	TWA	1 mg/m3
	Z1A	TWA	1 mg/m3
	Z1A	STEL	2 mg/m3
	NIOSH/GUIDE	REL	1 mg/m3
	NIOSH/GUIDE	STEL	2 mg/m3
	US CA OEL	TWA PEL	1 mg/m3
	US CA OEL	STEL	2 mg/m3
	CAD AB OEL	TWA	1 mg/m3
	CAD AB OEL	STEL	2 mg/m3
	CAD BC OEL	TWA	1 mg/m3

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	CAD BC OEL	STEL	2 mg/m3
	CAD ON OEL	TWAEV	1 mg/m3
	CAD ON OEL	STEV	2 mg/m3
	OEL (QUE)	STEL	2 mg/m3
	OEL (QUE)	TWA	1 mg/m3
Boric acid (H3BO3)	ACGIH	STEL	6 mg/m3
	ACGIH	TWA	2 mg/m3
	CAD ON OEL	STEV	6 mg/m3
	CAD BC OEL	TWA	2 mg/m3
	CAD ON OEL	TWAEV	2 mg/m3
	CAD BC OEL	STEL	6 mg/m3

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Tablets
Color	Yellow
Odor	Fresh citrus-like odor
Flash Point	> 100 °C
pH	2.3
Solubility	Completely Soluble
Solubility (in Water)	> 10 g/l
Boiling Point	> 200 °C

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Melting/Freezing Point > 90 °C

10. STABILITY AND REACTIVITY

Stability	This product is stable at ambient conditions.
Conditions to Avoid	No special precautions are necessary beyond normal good hygiene practices. See Section 8 of the MSDS for additional personal protection advice when handling this product.
Hazardous Polymerization	Hazardous polymerization will not occur.
Hazardous decomposition products	Decomposition will not occur if handled and stored properly.

11. TOXICOLOGICAL INFORMATION

Acute Toxicity : Oral

Species: Rat
Result: Estimated > 2,000 mg/kg

Acute Toxicity: Dermal

Result: Estimated > 2,000 mg/kg
Prolonged or repeated contact: Causes skin and eye burns.

Assessment Carcinogenicity

NTP Not Listed.

Mutagenicity

No data recorded.

12. ECOLOGICAL INFORMATION

Biodegradation

The subject product is expected to biodegrade and is not expected to persist for long periods in an aquatic environment.

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Bioaccumulation

Potential to bioaccumulate is low.

13. DISPOSAL CONSIDERATIONS

Disposal Recommendations

Dispose of waste at an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal. Flush container clean before discarding. Uncleaned empty containers should be disposed of in the same manner as the contents

14. TRANSPORT INFORMATION

Transport classifications may vary by container volume and may be influenced by regional or country variations in regulations.

15. REGULATORY INFORMATION

Regulatory Lists Searched

Component

US. EPA Emergency Planning and Community Right-To-Know Act (EPCRA) SARA Title III Section 302 Extremely Hazardous Substance (40 CFR 355, Appendix A)	None.	
US. EPA CERCLA Hazardous Substances (40 CFR 302)	None.	
US. EPA Emergency Planning and Community Right-To-Know Act (EPCRA) SARA Title III Section 313 Toxic Chemicals (40 CFR 372.65) - Supplier Notification Required	None present or none present in regulated quantities.	
US. Massachusetts Commonwealth's Right-to-Know Law (Appendix A to 105 Code of Massachusetts Regulations Section 670.000)	Ethanedioic acid	6153-56-6
US. New Jersey Worker and Community Right-to-Know Act (New Jersey Statute Annotated Section 34:5A-5)	1,2,3-Propanetricarboxylic acid, 2-hydroxy- Ethanedioic acid Boric acid (H3BO3) Fragrance	77-92-9 6153-56-6 10043-35-3
US. Pennsylvania Worker and Community Right-to-Know Law (34 Pa. Code Chap. 301-323)	1,2,3-Propanetricarboxylic acid, 2-hydroxy- Ethanedioic acid Boric acid (H3BO3) Fragrance	77-92-9 6153-56-6 10043-35-3

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WHMIS Classification

DB2 Toxic material causing other toxic effects



This product has been classified according to the hazard criteria of the CPR and the MSDS contains all of the information required by the CPR

Additional information is available by request.

16. OTHER INFORMATION

////// The information contained in this Material Safety Data Sheet is furnished without warranty, expressed or implied, except that it is accurate to the best knowledge of Whirlpool Corporation. ////