



## 1. CHEMICAL PRODUCT & COMPANY IDENTIFICATION

Product Name	Ecoworks A
Application of the substance/the preparation	Chemicals for various applications.
General Use	Support removal, parts created on Stratasys 3D Printers
Manufacturer and Address	Stratasys, Inc. 7665 Commerce Way Eden Prairie, MN 55344-2080 USA
Emergency Telephone Number	+1 800-595-5053 (INFOTRAC Command Center)

## 2. HAZARDS IDENTIFICATION

Classification	Xn Harmful
Health hazards	Harmful if swallowed. Risk of serious damage to eyes.

## 3. COMPOSITION/ INGREDIENT INFORMATION

Chemical characterization	Mixture of substances listed below with non-hazardous additions.		
Dangerous components	CAS: 15630-89-4	Disodium carbonate, compound with hydrogen peroxide (2:3)	10-25%

## 4. FIRST AID MEASURES

General information	Remove contaminated clothing.
After inhalation	Supply fresh air; consult doctor in case of symptoms.
After skin contact	Wash with soap and water. If skin irritation continues, consult a doctor.
After eye contact	Rinse opened eye for several minutes under running water. Use eye protection. Call a doctor immediately.
After swallowing	Do not induce vomiting! Rinse out mouth and then drink plenty of water. Call a doctor immediately



## 5. FIRE-FIGHTING MEASURES

Suitable extinguishing media	Carbon dioxide (CO <sub>2</sub> ), extinguishing powder or water spray/fog. Fight larger fires with water spray/fog or alcohol-resistant foam.
Extinguishing media which must not be used for safety reason.	Do not use water as an extinguisher with a full water jet.
Special hazards caused by material.	Can be released in case of fire: Carbon monoxide (CO) and Carbon dioxide (CO <sub>2</sub> ). Under certain fire conditions, traces of other toxic gases cannot be excluded. Oxidizing by development of oxygen.
Protective equipment	Wear self-contained breathing apparatus. Wear full protective suit.
Additional information	Cool endangered containers with water spray jet. Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.

## 6. ACCIDENTAL RELEASE MEASURES

Personal related safety precautions	Ensure adequate ventilation. Avoid contact with eyes. Wear protective clothing and keep away unprotected persons. Avoid causing dust. Avoid breathing dust. Remove all ignition sources.
Measure for environmental protection	Do not allow to enter drainage system, surface or ground water.
Measures for cleaning/collecting	Ensure adequate ventilation. Collect mechanically. Send for recovery or disposal in suitable containers. Dispose of the material collected according to regulations.

**7. HANDLING & STORAGE**

Safe handling	Ensure good ventilation/exhausting at the workplace. Avoid skin and eye contact. Prevent formation of dust. Any deposit of dust which cannot be avoided must be removed regularly. Do not breathe dust. Make sure that all applicable workplace limits are observed.
Protection against explosion and fires	Protect from heat. Keep ignition sources away - Do not smoke. Protect against electrostatic charges. Do not spray on flames or red-hot objects.
Requirements to be met by storerooms and containers	Observe all local and national regulations for storage of water polluting products.
Storage in one common storage facility	Store away from foodstuffs. Store away from flammable substances. Store away from oxidizing agents.
Storage conditions	Store in cool, dry conditions in well sealed containers. Protect from heat and direct sunlight. Store container in a well ventilated position. Keep container tightly sealed.

**8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

Additional information about design of technical systems	No further data; see Section 7.
Components with critical values that require monitoring at the workplace	Observe all workplace limits for dust. The lists that were valid during the compilation were used as basis.
General protective and hygienic measures	Keep away from foodstuffs, beverages and food. Do not eat, drink or smoke while working. Avoid contact with the eyes. Avoid close or long term contact with the skin. Instantly remove any contaminated garments. Wash hands during breaks and at the end of the work. Use skin protection cream for preventive skin protection.
Breathing equipment	Use breathing protection in case of dust formation. If all workplace limits are observed and good ventilation is ensured, no special precautions necessary.
Protection of hands	Protective gloves To avoid skin problems reduce the wearing of gloves to the required minimum. Check the permeability prior to each renewed use of the glove.



	<p>The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/the chemical mixture. Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation.</p>
Protective gloves	<p>To avoid skin problems reduce the wearing of gloves to the required minimum. Check the permeability prior to each renewed use of the glove. The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/the chemical mixture. Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation.</p>
Material of gloves	<p>The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.</p>
Penetration time of glove material	<p>Protective gloves should be replaced at first signs of wear. The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.</p>
Eye protection	<p>Tightly sealed safety glasses.</p>
Body protection	<p>Protective work clothing. Protective clothing should be selected specifically for the working place.</p>



## 9. PHYSICAL & CHEMICAL PROPERTIES

Form	Solid
Color	White
Smell	Characteristic
Melting point/melting range:	Not determined
Boiling point/boiling range	Not determined
Flash point	Not applicable
Inflammability (solid, gaseous)	Contact with combustible material may cause fire.
Self-inflammability	Product is not self igniting.
Danger of explosion	At elevated temperatures explosive when mixed with combustible material.
Density	Not determined
Solubility in / miscibility with water	Insoluble
Addition information	Further information, refer to technical data sheet.

## 10. STABILITY AND REACTIVITY

Thermal decomposition / conditions to be avoided	No decomposition if used according to specifications. Avoid impact, friction, heat, sparks, and electrostatic charges.
Materials to avoided	Strong oxidizing agents.
Dangerous reactions	No dangerous reactions known.
Dangerous products of decomposition	Carbon monoxide (CO) and Carbon dioxide (CO <sub>2</sub> ).

## 11. TOXICOLOGICAL INFORAMTION

LD/LC50 values that are relevant for classification	15630-89-4 Disodium carbonate, compound with hydrogen peroxide (2:3)	
Oral	LD50	1034 mg/kg (rat)
Dermal	LD50	> 2000mg/kg (rabbit)
Inhalative	LC50/1 h	> 4.58 mg/l (rat)
Primary irritant effect on the skin	Dust particles may mechanically irritate the skin.	
Primary irritant effect on the eye	Strong irritant with the danger of severed eye injury.	



## 12. ECOLOGICAL INFORMATION

Aquatic toxicity	156-89-4 Disodium carbonate, compound with hydrogen peroxide (2:3)
EC50	4.9 mg/l (Daphnia pulex)
LC50	70.7 mg/l (Fathead minnow (Pimephales promelas))
NOEC	2.0 mg/l (Daphnia pulex)
NOEC/96 h	7.4 mg/l (Fathead minnow (Pimephales promelas))
Additional ecological information.	Water hazard class 1 (Self-assessment): slightly hazardous for water. Do not allow product to reach ground water, water bodies or sewage system.

## 13. DISPOSAL CONSIDERATIONS

Disposal Instructions	Disposal must be made according to official regulations.
Unclean packages	Disposal must be made according to official regulations.

## 14. TRANSPORT INFORMATION

US Department of Transportation (D.O.T.)	Not regulated.
IMO Regulation	Not regulated.
IATA/ICAO Regulation	Not regulated.



## 15. REGULATORY INFORMATION

All components of this product are listed on these chemical inventories: U.S. TSCA, Canadian DSL, EU EINECS, Japanese ENCS, Korean ECL, and Australian AICS.

### U.S. Regulations

#### EPA SARA Chemical Listings

No SARA 3 13-listed chemicals in this product.

#### California Proposition 65

Not Applicable

#### Toxic Substances Control Act (TSCA)

This product is in compliance with all rules and orders of TSCA

#### State Right-to-Know

#### OSHA Hazard Communication Standard

This product is not a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

### Canadian Regulations

WHMIS Information: The Canadian Workplace Hazardous Materials Information System (WHMIS) Classification for this product is: D2

**Disclaimer** This Material Safety Data Sheet document is provided without charge to customers of Stratasys. Data is the most current known to Stratasys at the time of preparation of this document and is believed to be accurate. It should not be construed as guaranteeing specific properties of the products as described or suitability for a particular application. This document was prepared to the requirements of the jurisdiction specified in Section 1 above and may not meet regulatory requirements in other countries.



## 1. CHEMICAL PRODUCT & COMPANY IDENTIFICATION

Product Name	Ecoworks B
Application of the substance/the preparation	Chemicals for various applications.
General Use	Support removal, parts created on Stratasys 3D Printers
Manufacturer and Address	Stratasys, Inc. 7665 Commerce Way Eden Prairie, MN 55344-2080 USA
Emergency Telephone Number	+1 800-595-5053 (INFOTRAC Command Center)

## 2. HAZARDS IDENTIFICATION

Classification	Xn Harmful
Health hazards	Harmful if swallowed. Risk of serious damage to eyes.

## 3. COMPOSITION/ INGREDIENT INFORMATION

Chemical characterization	Mixture of substances listed below with non-hazardous additions.			
Dangerous components	CAS: 77-92-9	Citric acid, anhydrous	Xi, R 36	25-50%

## 4. FIRST AID MEASURES

General information	Remove contaminated clothing.
After inhalation	Supply fresh air; consult doctor in case of symptoms.
After skin contact	Wash with soap and water. If skin irritation continues, consult a doctor.
After eye contact	Rinse opened eye for several minutes under running water and then consult a doctor.
After swallowing	Do not induce vomiting! Rinse out mouth and then drink plenty of water. In case of persistent symptoms, consult a doctor.





## 5. FIRE-FIGHTING MEASURES

Suitable extinguishing media	Carbon dioxide (CO <sub>2</sub> ), extinguishing powder or water spray/fog. Fight larger fires with water spray/fog or alcohol-resistant foam.
Extinguishing media which must not be used for safety reason.	Do not use water as an extinguisher with a full water jet.
Special hazards caused by material.	Can be released in case of fire: Carbon monoxide (CO) and Carbon dioxide (CO <sub>2</sub> ). Under certain fire conditions, traces of other toxic gases cannot be excluded.
Protective equipment	Wear self-contained breathing apparatus.
Additional information	Cool endangered containers with water spray jet. Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.

## 6. ACCIDENTAL RELEASE MEASURES

Personal related safety precautions	Ensure adequate ventilation. Wear protective clothing and keep away unprotected persons. Avoid skin and eye contact. Avoid causing dust. Avoid breathing dust.
Measure for environmental protection	Do not allow to enter drainage system, surface or ground water.
Measures for cleaning/collecting	Ensure adequate ventilation. Collect mechanically. Send for recovery or disposal in suitable containers. Dispose of the material collected according to regulations. Clean up affected area.



## 7. HANDLING & STORAGE

Safe handling	Ensure good ventilation/exhausting at the workplace. Avoid skin and eye contact. Prevent formation of dust. Any deposit of dust which cannot be avoided must be removed regularly. Do not breathe dust. Make sure that all applicable workplace limits are observed.
Protection against explosion and fires	No special measures required.
Requirements to be met by storerooms and containers	Observe all local and national regulations for storage of water polluting products.
Storage in one common storage facility	Store away from foodstuffs. Store away from oxidizing agents. Store away from metals.
Storage conditions	Keep container tightly sealed. Store in cool, dry conditions in well sealed containers. Store container in a well ventilated position. Recommended storage temperature: 20° to 25° C (68° to 77° F).

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Additional information about design of technical systems	No further data; see Section 7.
Components with critical values that require monitoring at the workplace	Observe all workplace limits for dust. The lists that were valid during the compilation were used as basis.
General protective and hygienic measures	Keep away from foodstuffs, beverages and food. Do not eat, drink or smoke while working. Instantly remove any contaminated garments. Avoid contact with the eyes and skin. Wash hands during breaks and at the end of the work. Use skin protection cream for preventive skin protection.
Breathing equipment	Use breathing protection in case of dust formation. If all workplace limits are observed and good ventilation is ensured, no special precautions necessary.
Protection of hands	Protective gloves To avoid skin problems reduce the wearing of gloves to the required minimum. Check the permeability prior to each renewed use of the glove. The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.



	Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/the chemical mixture. Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation.
Material of gloves	The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.
Penetration time of glove material	Protective gloves should be replaced at first signs of wear. The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
Eye protection	Tightly sealed safety glasses.
Body protection	Protective work clothing. Protective clothing should be selected specifically for the working place.

**9. PHYSICAL & CHEMICAL PROPERTIES**

Form	Solid
Color	White
Smell	Characteristic
Melting point/melting range:	Not determined
Boiling point/boiling range	Not determined
Flash point	Not applicable
Inflammability (solid, gaseous)	Contact with combustible material may cause fire.
Self-inflammability	Product is not self igniting.
Danger of explosion	Product is not explosive.
Density	Not determined
Solubility in / miscibility with water	Soluble
pH-value (10 g/l) at 20° C (68° F)	~9
Addition information	Further information, refer to technical data sheet.



## 10. STABILITY AND REACTIVITY

Thermal decomposition / conditions to be avoided	No decomposition if used according to specifications.
Materials to avoided	Strong oxidizing agents.
Dangerous reactions	No dangerous reactions known.
Dangerous products of decomposition	Carbon monoxide (CO) and Carbon dioxide (CO <sub>2</sub> ).

## 11. TOXICOLOGICAL INFORMATION

Primary irritant effect on the skin	Dust particles may mechanically irritate the skin.
Primary irritant effect on the eye	Irritant effect.

## 12. ECOLOGICAL INFORMATION

Additional ecological information.	Water hazard class 1 (Self-assessment): slightly hazardous for water. Do not allow product to reach ground water, water bodies or sewage system.
------------------------------------	---

## 13. DISPOSAL CONSIDERATIONS

Disposal Instructions	Disposal must be made according to official regulations.
Unclean packages	Disposal must be made according to official regulations.
Recommended cleaning agent	Water, if necessary with cleaning agent.

## 14. TRANSPORT INFORMATION

US Department of Transportation (D.O.T.)	Not regulated.
IMO Regulation	Not regulated.
IATA/ICAO Regulation	Not regulated.



## 15. REGULATORY INFORMATION

All components of this product are listed on these chemical inventories: U.S. TSCA, Canadian DSL, EU EINECS, Japanese ENCS, Korean ECL, and Australian AICS.

### U.S. Regulations

#### EPA SARA Chemical Listings

No SARA 3 13-listed chemicals in this product.

#### California Proposition 65

Not Applicable

#### Toxic Substances Control Act (TSCA)

This product is in compliance with all rules and orders of TSCA

#### State Right-to-Know

#### OSHA Hazard Communication Standard

This product is not a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

### Canadian Regulations

WHMIS Information: The Canadian Workplace Hazardous Materials Information System (WHMIS) Classification for this product is: D2

**Disclaimer** This Material Safety Data Sheet document is provided without charge to customers of Stratasys. Data is the most current known to Stratasys at the time of preparation of this document and is believed to be accurate. It should not be construed as guaranteeing specific properties of the products as described or suitability for a particular application. This document was prepared to the requirements of the jurisdiction specified in Section 1 above and may not meet regulatory requirements in other countries.

**Issue date** 7-22-2010

### Revision History

Revision	Revision Date
1.0	7-22-2010 First release