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**** MATERIAL SAFETY DATA SHEET ****

FL-70 Detergent Biodegradable
06352

**** SECTION 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION ****

MSDS Name: FL-70 Detergent Biodegradable
Catalog Numbers:
S70114, SF105 1, SF105 4, SF1051, SF1054
Synonyms:
None

Company Identification: Fisher Scientific
1 Reagent Lane
Fairlawn, NJ 07410

For information, call: 201-796-7100
Emergency Number: 201-796-7100
For CHEMTREC assistance, call: 800-424-9300
For International CHEMTREC assistance, call: 703-527-3887

**** SECTION 2 - COMPOSITION, INFORMATION ON INGREDIENTS ****

CAS#	Chemical Name	%	EINECS#
64-02-8	Tetrasodium ethylene diamine tetraacetate	1.4	200-573-9
102-71-6	Triethanolamine	1.3	203-049-8
112-80-1	Oleic acid	3.0	204-007-1
497-19-8	Sodium carbonate	3.0	207-838-8
7732-18-5	Water	88.5	231-791-2
25322-68-3	Polyethylene glycol 400	1.0	unlisted
68131-40-8	Tergitol (R) Nonionic Surfactant 15-S-9	1.8	unlisted

Hazard Symbols: None Listed.
Risk Phrases: None Listed.

**** SECTION 3 - HAZARDS IDENTIFICATION ****

EMERGENCY OVERVIEW

Appearance: yellow liquid.
Caution! May cause respiratory tract irritation. May cause skin irritation. May cause eye irritation. May cause digestive tract irritation.
Target Organs: None known.

Potential Health Effects

Eye:
May cause eye irritation.
Skin:
May cause skin irritation. Prolonged and/or repeated contact may cause irritation and/or dermatitis.
Ingestion:
Causes gastrointestinal irritation with nausea, vomiting and diarrhea.
Inhalation:
May cause respiratory tract irritation.
Chronic:
Prolonged or repeated skin contact may cause dermatitis.

**** SECTION 4 - FIRST AID MEASURES ****

Eyes:
Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid.
Skin:
Flush skin with plenty of soap and water for at least 15 minutes while removing contaminated clothing and shoes. Get medical aid if irritation develops or persists. Wash clothing before reuse.
Ingestion:
Do NOT induce vomiting. If victim is conscious and alert, give 2-4 cupfuls of milk or water. Get medical aid.
Inhalation:
Remove from exposure to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid if cough or other symptoms appear.
Notes to Physician:
Treat symptomatically and

**** SECTION 5 - FIRE FIGHTING MEASURES ****

General Information:
As in any fire, wear a self-contained breathing apparatus in

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pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. Use water spray to keep fire-exposed containers cool. Vapors may be heavier than air. They can spread along the ground and collect in low or confined areas. Containers may explode when heated.
Extinguishing Media:

In case of fire, use water, dry chemical, chemical foam, or alcohol-resistant foam. Substance is noncombustible; use agent most appropriate to extinguish surrounding fire. Cool containers with flooding quantities of water until well after fire is out.
Autoignition Temperature: Not applicable.
Flash Point: Not applicable.
Explosion Limits, lower: Not available.
Explosion Limits, upper: Not available.
NFPA Rating: (estimated) Health: 1; Flammability: 0; Instability: 0

**** SECTION 6 - ACCIDENTAL RELEASE MEASURES ****

General Information: Use proper personal protective equipment as indicated in Section 8.

Spills/Leaks:

Absorb spill with inert material (e.g. vermiculite, sand or earth), then place in suitable container. Avoid runoff into storm sewers and ditches which lead to waterways. Clean up spills immediately, observing precautions in the Protective Equipment section. Provide ventilation.

**** SECTION 7 - HANDLING and STORAGE ****

Handling:

Use with adequate ventilation. Avoid contact with skin and eyes. Keep container tightly closed. Avoid ingestion and inhalation. Wash clothing before reuse.

Storage:

Store in a cool, dry, well-ventilated area away from incompatible substances. Keep containers tightly closed.

**** SECTION 8 - EXPOSURE CONTROLS, PERSONAL PROTECTION ****

Engineering Controls:

Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate ventilation to keep airborne concentrations low.

Exposure Limits

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
Tetrasodium ethylene diamine tetraacetate	none listed	none listed	none listed
Triethanolamine	5 mg/m3	none listed	none listed
Oleic acid	none listed	none listed	none listed
Sodium carbonate	none listed	none listed	none listed
Water	none listed	none listed	none listed
Polyethylene glycol 400	none listed	none listed	none listed
Tergitol (R) Nonionic Surfactant 15-S-9	none listed	none listed	none listed

OSHA Vacated PELs:

Tetrasodium ethylene diamine tetraacetate:
No OSHA Vacated PELs are listed for this chemical.
Triethanolamine:
No OSHA Vacated PELs are listed for this chemical.
Oleic acid:
No OSHA Vacated PELs are listed for this chemical.
Sodium carbonate:
No OSHA Vacated PELs are listed for this chemical.
Water:
No OSHA Vacated PELs are listed for this chemical.
Polyethylene glycol 400:
No OSHA Vacated PELs are listed for this chemical.
Tergitol (R) Nonionic Surfactant 15-S-9:
No OSHA Vacated PELs are listed for this chemical.

Personal Protective Equipment

Eyes:

Wear appropriate protective eyeglasses or chemical

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safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

Skin: Wear appropriate gloves to prevent skin exposure.

Clothing: Wear appropriate protective clothing to minimize contact with skin.

Respirators: Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Always use a NIOSH or European Standard EN 149 approved respirator when necessary.

**** SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES ****

Physical State: Liquid
 Color: yellow
 Odor: none reported
 pH: Slightly alkaline.
 Vapor Pressure: Not available.
 Vapor Density: >1.0
 Evaporation Rate: >1 (ether=1)
 Viscosity: Not available.
 Boiling Point: > 100 deg C
 Freezing/Melting Point: > 0 deg C
 Decomposition Temperature: Not available.
 Solubility in water: Completely soluble in water.
 Specific Gravity/Density: 1.04
 Molecular Formula: Mixture
 Molecular Weight: 0

**** SECTION 10 - STABILITY AND REACTIVITY ****

Chemical Stability: Stable at room temperature in closed containers under normal storage and handling conditions.

Conditions to Avoid: Incompatible materials, excess heat.

Incompatibilities with Other Materials: Oleic acid is incompatible with aluminum and perchloric acid. Sodium carbonate is incompatible with aluminum, fluorine, phosphorus pentoxide, and sulfuric acid.

Hazardous Decomposition Products: Carbon monoxide, irritating and toxic fumes and gases, carbon dioxide.

Hazardous Polymerization: Has not been reported.

**** SECTION 11 - TOXICOLOGICAL INFORMATION ****

RTECS#:

CAS# 64-02-8: AH5075000
 CAS# 102-71-6: KL9275000
 CAS# 112-80-1: RG2275000
 CAS# 497-19-8: VZ4050000
 CAS# 7732-18-5: TC0110000
 CAS# 25322-68-3: TQ3500000 TQ3520000 TQ3560000 TQ3580000
 TQ3600000 TQ3610000 TQ3620000 TQ3630000 TQ3650000
 TQ3675000 TQ3700000 TQ3800000 TQ3850000 TQ4025000
 TQ4026000 TQ4027000 TQ4028000 TQ4030000 TQ4040000
 TQ4041000 TQ4050000 TQ4070000 TQ4100000 TQ4105000
 TQ4110000 TQ4950000 TQ5090000 TR1579850 ZD2465300
 CAS# 68131-40-8: WZ5200000 WZ5300000 WZ5425000 WZ5600000
 WZ5950000 WZ5980000 WZ6000000

LD50/LC50:

CAS# 64-02-8: Draize test, rabbit, eye: 100 mg/24H Moderate; Draize test, rabbit, skin: 500 mg/24H Moderate.
 CAS# 102-71-6: Draize test, rabbit, eye: 20 mg Severe; Draize test, rabbit, eye: 10 mg Mild; Draize test, rabbit, skin: 560 mg/24H Mild;
 Oral, mouse: LD50 = 5846 mg/kg; Oral, rabbit: LD50 = 2200 mg/kg;
 Oral, rat: LD50 = 4920 uL/kg; Skin, rabbit: LD50 = >20 mL/kg; Skin, rat: LD50 = >16 mL/kg.
 CAS# 112-80-1: Draize test, rabbit, eye: 100 mg Mild; Oral, mouse: LD50 = 28 gm/kg; Oral, rat: LD50 = 25 gm/kg.
 CAS# 497-19-8
 CAS# 7732-18-5
 CAS# 25322-68-3
 CAS# 68131-40-8.

Carcinogenicity:

Tetrasodium ethylene diamine tetraacetate -
 Not listed by ACGIH, IARC, NIOSH, NTP, or OSHA.
 Triethanolamine -
 IARC: Group 3 carcinogen
 Oleic acid -
 Not listed by ACGIH, IARC, NIOSH, NTP, or OSHA.
 Sodium carbonate -
 Not listed by ACGIH, IARC, NIOSH, NTP, or OSHA.
 Water -
 Not listed by ACGIH, IARC, NIOSH, NTP, or OSHA.

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Polyethylene glycol 400 -
 Not listed by ACGIH, IARC, NIOSH, NTP, or OSHA.
 Tergitol (R) Nonionic Surfactant 15-S-9 -
 Not listed by ACGIH, IARC, NIOSH, NTP, or OSHA.

Epidemiology:

No information available.

Teratogenicity:

No information available.

Reproductive Effects:

No information available.

Neurotoxicity:

No information available.

Mutagenicity:

No information available.

Other Studies:

See actual entry in RTECS for complete information.

**** SECTION 12 - ECOLOGICAL INFORMATION ****

**** SECTION 13 - DISPOSAL CONSIDERATIONS ****

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Parts 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.
 RCRA P-Series: None listed.
 RCRA U-Series: None listed.

**** SECTION 14 - TRANSPORT INFORMATION ****

US DOT

No information available

Canadian TDG

No information available.

**** SECTION 15 - REGULATORY INFORMATION ****

US FEDERAL

TSCA

CAS# 64-02-8 is listed on the TSCA inventory.
 CAS# 102-71-6 is listed on the TSCA inventory.
 CAS# 112-80-1 is listed on the TSCA inventory.
 CAS# 497-19-8 is listed on the TSCA inventory.
 CAS# 7732-18-5 is listed on the TSCA inventory.
 CAS# 25322-68-3 is listed on the TSCA inventory.
 CAS# 68131-40-8 is listed on the TSCA inventory.
 Health & Safety Reporting List
 CAS# 102-71-6: Effective Date: 4/13/89; Sunset Date: 12/19/95
 Chemical Test Rules
 None of the chemicals in this product are under a Chemical Test Rule.

Section 12b

None of the chemicals are listed under TSCA Section 12b.

TSCA Significant New Use Rule

None of the chemicals in this material have a SNUR under TSCA.

SARA

CERCLA Hazardous Substances and corresponding RQs
 None of the chemicals in this material have an RQ.
 SARA Section 302 Extremely Hazardous Substances
 None of the chemicals in this product have a TPQ.

SARA Codes

CAS # 102-71-6: acute.
 CAS # 497-19-8: acute.
 CAS # 25322-68-3.
 CAS # 68131-40-8: acute, chronic.
 Section 313
 No chemicals are reportable under Section 313.

Clean Air Act:

This material does not contain any hazardous air pollutants.
 This material does not contain any Class 1 Ozone depleters.
 This material does not contain any Class 2 Ozone depleters.

Clean Water Act:

None of the chemicals in this product are listed as Hazardous Substances under the CWA.
 None of the chemicals in this product are listed as Priority Pollutants under the CWA.
 None of the chemicals in this product are listed as Toxic Pollutants under the CWA.

OSHA:

None of the chemicals in this product are considered highly hazardous by OSHA.

STATE

Tetrasodium ethylene diamine tetraacetate is not present on state lists from CA, PA, MN, MA, FL, or NJ.
 Triethanolamine can be found on the following state right to know lists: Florida, Pennsylvania, Minnesota, Massachusetts.

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Oleic acid can be found on the following state right to know lists:
 Pennsylvania.

Sodium carbonate is not present on state lists from CA, PA, MN, MA, FL, or NJ.

Water is not present on state lists from CA, PA, MN, MA, FL, or NJ.

Polyethylene Glycol 400 can be found on the following state right to know lists: Minnesota.

Tergitol (R) Nonionic Surfactant 15-S-9 is not present on state lists from CA, PA, MN, MA, FL, or NJ.

California No Significant Risk Level:

None of the chemicals in this product are listed.

European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols: Not available.

Risk Phrases:

Safety Phrases:

WGK (Water Danger/Protection)

CAS# 64-02-8: 2

CAS# 102-71-6: 1

CAS# 112-80-1: 1

CAS# 497-19-8: 1

CAS# 7732-18-5: No information available.

CAS# 25322-68-3: 1

CAS# 68131-40-8: 2

United Kingdom Occupational Exposure Limits

United Kingdom Maximum Exposure Limits

Canada

CAS# 64-02-8 is listed on Canada's DSL List.

CAS# 102-71-6 is listed on Canada's DSL List.

CAS# 112-80-1 is listed on Canada's DSL List.

CAS# 497-19-8 is listed on Canada's DSL List.

CAS# 7732-18-5 is listed on Canada's DSL List.

CAS# 25322-68-3 is listed on Canada's DSL List.

CAS# 68131-40-8 is listed on Canada's DSL List.

This product has a WHMIS classification of D2B.

CAS# 64-02-8 is not listed on Canada's Ingredient Disclosure List.

CAS# 102-71-6 is listed on Canada's Ingredient Disclosure List.

CAS# 112-80-1 is listed on Canada's Ingredient Disclosure List.

CAS# 497-19-8 is listed on Canada's Ingredient Disclosure List.

CAS# 7732-18-5 is not listed on Canada's Ingredient Disclosure List.

CAS# 25322-68-3 is not listed on Canada's Ingredient Disclosure List.

CAS# 68131-40-8 is not listed on Canada's Ingredient Disclosure List.

Exposure Limits

CAS# 102-71-6: OEL-SWEDEN:TWA 5 mg/m3;STEL 10 mg/m3

**** SECTION 16 - ADDITIONAL INFORMATION ****

MSDS Creation Date: 6/25/1999 Revision #2 Date: 8/02/2000

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no way shall the company be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if the company has been advised of the possibility of such damages.