Language: EN
Country:

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

Formaldehyde Solution (Formal Saline)
90370

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

MSDS Name: Formaldehyde Solution (Formal Saline)
Catalog Numbers:
F/1510
Synonyms:
None.
Company Identification: Fisher Scientific UK
Bishop Meadow Road
Loughborough, Leicestershire
LE11 5RG, UK
For information, call: 01509 231166
For emergencies, call: 01509 231166

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

CAS#	Chemical Name	%	EINECS#	Haz Symbols	Risk Phrases
50-00-0	Formaldehyde	4.0	200-001-8	T	23/24/25 34 40 43
7647-14-5	Sodium chloride	0.9	231-598-3		
7732-18-5	Water	Balance	231-791-2		

Text for R-phrases: see Section 16
Hazard Symbols: XN
Risk Phrases: 40 43

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

EMERGENCY OVERVIEW
Limited evidence of a carcinogenic effect. May cause sensitization by skin contact.Possible risks of irreversible effects.

Potential Health Effects
Eye:
Causes eye irritation. May result in corneal injury.
Skin:
Causes skin irritation. Harmful if absorbed through the skin. May cause skin sensitization, an allergic reaction, which becomes evident upon re-exposure to this material.
Ingestion:
Causes gastrointestinal irritation with nausea, vomiting and diarrhea. May be harmful if swallowed.
Inhalation:
Harmful if inhaled. Causes respiratory tract irritation. May cause allergic respiratory reaction.
Chronic:
May cause cancer according to animal studies.

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

Eyes:
Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid immediately.
Skin:
Get medical aid. Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse.
Ingestion:
If victim is conscious and alert, give 2-4 cupfuls of milk or water. Never give anything by mouth to an unconscious person. Get medical aid immediately.
Inhalation:
Get medical aid immediately. Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.
Notes to Physician:

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

General Information:
As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear.
Extinguishing Media:
For small fires, use dry chemical, carbon dioxide, water spray or alcohol-resistant foam.

**** 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 containers. Clean up spills immediately.

then place in suitable container. Clean up spills immediately, observing precautions in the Protective Equipment section. Provide ventilation.

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

Handling:
Wash thoroughly after handling. Wash hands before eating. Use only in a well-ventilated area. Do not get in eyes, on skin, or on clothing. Keep container tightly closed. Do not ingest or inhale.
Storage:
Store in a tightly closed container. Store in a cool, dry, well-ventilated area away from incompatible substances.

**** 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 general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits. See 29CFR 1910.1048 for regulatory requirements pertaining to all occupational exposures to formaldehyde, i.e., from formaldehyde gas, its solutions, and materials that release formaldehyde.
Personal Protective Equipment

Eyes:
Not available.
Skin:
Wear appropriate protective gloves to prevent skin exposure.
Clothing:
Wear appropriate protective clothing to prevent skin exposure.
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:	clear, colorless
Odor:	Pungent odor.
pH:	Not available.
Vapor Pressure:	23 mm Hg @20C
Viscosity:	Not available.
Boiling Point:	100 deg C
Freezing/Melting Point:	0 deg C
Autoignition Temperature:	Not applicable.
Flash Point:	Not applicable.
Explosion Limits, lower:	Not available.
Explosion Limits, upper:	Not available.
Decomposition Temperature:	Not available.
Solubility in water:	Complete in water.
Specific Gravity/Density:	1 (Water=1)
Molecular Formula:	CH2O
Molecular Weight:	30.0134

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

Chemical Stability:
Stable under normal temperatures and pressures.
Conditions to Avoid:
Incompatible materials, excess heat.
Incompatibilities with Other Materials:
Strong oxidants, caustic soda, perchloric acid + aniline, performic acid, nitromethane, magnesium carbonate, peroxide, ash and alkalis, amines and acids.
Hazardous Decomposition Products:
Irritating and toxic gases, oxides of carbon.
Hazardous Polymerization: Will not occur.

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

RTECS#:
CAS# 50-00-0: LP8925000
CAS# 7647-14-5: VZ4725000
CAS# 7732-18-5: ZC0110000
LD50/LC50:
CAS# 50-00-0: Draize test, rabbit, eye: 750 ug/24H Severe; Draize test, rabbit, eye: 750 ug Severe; Draize test, rabbit, eye: 10 mg Severe; Draize test, rabbit, eye: 37% Severe; Draize test, rabbit, skin: 2 mg/24H Severe; Draize test, rabbit, skin: 50 mg/24H Moderate; Inhalation, mouse: LC50 = 454 mg/m3/4H; Inhalation, mouse: LC50 = 505 mg/m3/2H; Inhalation, rat: LC50 = 203 mg/m3; Inhalation, rat: LC50 = 578 mg/m3/2H; Inhalation, rat: LC50 = 250 ppm/2H; Oral, mouse: LD50 = 42 mg/kg; Oral, mouse: LD50 = 385 mg/kg; Oral, mouse: LD50 = 500 mg/kg; Oral, rat: LD50 = 100 mg/kg; Oral, rat: LD50 = 500 mg/kg; Skin, rabbit: LD50 = 270 uL/kg; Skin, rabbit: LD50 = 270 mg/kg.
CAS# 7647-14-5: Draize test, rabbit, eye: 100 mg Mild; Draize test, rabbit, eye: 100 mg/24H Moderate; Draize test, rabbit, eye: 10 mg Moderate; Draize test, rabbit, skin: 50 mg/24H Mild; Draize test, rabbit, skin: 500 mg/24H Mild; Inhalation, rat: LC50 = >42 gm/m3/1H; Oral, mouse: LD50 = 4 gm/kg; Oral, rat: LD50 = 3000 mg/kg; Skin, rabbit: LD50 = >10 gm/kg.
CAS# 7732-18-5: Oral, rat: LD50 = >90 mL/kg.

CAS# 7732-18-5: Oral, rat: LD50 = 990 mL/Kg.

Carcinogenicity:
Formaldehyde -
ACGIH: A2 - Suspected Human Carcinogen
California: carcinogen; initial date 1/1/88
NIOSH: potential occupational carcinogen
NTP: Suspect carcinogen
OSHA: Possible Select carcinogen
IARC: Group 2A carcinogen
Sodium chloride -
Not listed by ACGIH, IARC, NIOSH, NTP, or OSHA.
Water -
Not listed by ACGIH, IARC, NIOSH, NTP, or OSHA.
Other:
See actual entry in RTECS for complete information.

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

Ecotoxicity:
Atlantic salmon LC50=173 uL/L/96H; Catfish (fresh water) TLm=32 ppm/24H Flounder (salt water) TLm=100-330 ppm/48H; Fathead minnowLC50=10-100 uL/L/96H; Rainbow trout LC50= 168mg/L/48H; Zebrafish LC50=41mg/L/96H; Water flea LC50=52 mg/L/24H.Cas# 50-00-0: LC50(96Hr.) rainbow trout = 0.12 mL/L; flowthrough bioassay;LC50(96Hr.) fathead minnow = 24.1 mg/L; flowthrough conditions;LC50 (96Hr.) bluegill = 0.10 mg/L; Flow-through conditions;EC50 (96Hr.) water flea = 20 mg/L; EC50 (30 min)photobacterium phospherum = 3.00-10.2 mg/L; Microtox.

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

Products which are considered hazardous for supply are classified as Special Waste and the disposal of such chemicals is covered by regulations which may vary according to location. Contact a specialist disposal company or the local waste regulator for advice. Empty containers must be decontaminated before returning for recycling.

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

IATA
Not regulated as a hazardous material.
IMO
Not regulated as a hazardous material.
RID/ADR
Not regulated as a hazardous material.
USA RQ:CAS# 50-00-0: 100 lb final RQ; 45.4 kg final RQ

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

European/International Regulations
European Labeling in Accordance with EC Directives
Hazard Symbols: XN
Risk Phrases:
R 40 Limited evidence of a carcinogenic effect.
R 43 May cause sensitization by skin contact.
Safety Phrases:
S 26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S 36/37 Wear suitable protective clothing and gloves.
S 45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).
S 51 Use only in well-ventilated areas.
WGK (Water Danger/Protection)
CAS# 50-00-0: 2
CAS# 7647-14-5: 0
CAS# 7732-18-5: No information available.
United Kingdom Occupational Exposure Limits

United Kingdom Maximum Exposure Limits
CAS# 50-00-0: MEL-United Kingdom, TWA 2 ppm TWA; 2.5 mg/m3 TWA
CAS# 50-00-0: MEL-United Kingdom, STEL 2 ppm STEL; 2.5 mg/m3 STEL
CAS# 50-00-0: MEL-United Kingdom, STEL 2 ppm STEL; 2.5 mg/m3 STEL

Canada
CAS# 50-00-0 is listed on Canada's DSL List.
CAS# 7647-14-5 is listed on Canada's DSL List.
CAS# 7732-18-5 is listed on Canada's DSL List.
CAS# 50-00-0 is listed on Canada's Ingredient Disclosure List.
CAS# 7647-14-5 is not listed on Canada's Ingredient Disclosure List.
CAS# 7732-18-5 is not listed on Canada's Ingredient Disclosure List.
Exposure Limits
CAS# 50-00-0: OEL-ARAB Republic of Egypt:TWA 2 ppm (3 mg/m3)
OEL-AUSTRALIA:TWA 1 ppm (1.5 mg/m3);STEL 2 ppm (3 mg/m3);CAR
OEL-BELGIUM:TWA 1 ppm (1.2 mg/m3);STEL 2 ppm (2.5 mg/m3);CAR
OEL-CZECHOSLOVAKIA:TWA 0.5 mg/m3;STEL 1 mg/m3
OEL-DENMARK:STEL 0.3 ppm (0.4 mg/m3);Carcinogen
OEL-FINLAND:STEL 1 ppm (1.3 mg/m3);Skin
OEL-FRANCE:STEL 2 ppm (3 mg/m3)
OEL-GERMANY:TWA 0.5 ppm (0.6 mg/m3);Carcinogen
OEL-HUNGARY:STEL 0.6 mg/m3;Carcinogen
OEL-JAPAN:TWA 0.5 ppm (0.61 mg/m3);Carcinogen
OEL-THE NETHERLANDS:TWA 1 ppm (1.5 mg/m3);STEL 2 ppm (3 mg/m3)
OEL-THE PHILIPPINES:TWA 5 ppm (6 mg/m3)
OEL-POLAND:TWA 2 mg/m3
OEL-RUSSIA:TWA 0.5 ppm;STEL 0.5 mg/m3;Skin
OEL-SWEDEN:TWA 0.5 ppm (0.6 mg/m3);STEL 1 ppm (1. mg/m3)

OEL-SWITZERLAND:TWA 0.5 ppm (0.6 mg/m3);STEL 1 pp (1.2 mg/m3)
OEL-THAILAND:TWA 3 ppm;STEL 5 ppm
OEL-TURKEY:TWA 5 ppm (6 mg/m3)
OEL-UNITED KINGDOM:TWA 2 ppm (2.5 mg/m3);STEL 2 ppm (2.5 mg/m3)
OEL IN BULGARIA, COLOMBIA, JORDAN, KOREA check ACGIH TLV
OEL IN NEW ZEALAND, SINGAPORE, VIETNAM check ACGI TLV

US FEDERAL

TSCA

CAS# 50-00-0 is listed on the TSCA inventory.
CAS# 7647-14-5 is listed on the TSCA inventory.
CAS# 7732-18-5 is listed on the TSCA inventory.

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

MSDS Creation Date: 6/23/2004 Revision #0 Date: Original.

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.
