BLUE DIAMOND PRODUCTS LTD
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Heckmondwike
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PRODUCT DATA SHEET

(This booklet incorporates the Specification and M.S.D.S.)

PRODUCT FORMALDEHYDE	**BASED TOILET FLUID**
CAS NO. 50-00-0	
TARIFF NO. 291211000	
U.N NO. 2209	
EINECS NO. 200-001-8	
IMCO CLASS 8 CORROSIVE	
HAZARDS TOXIC & CORROSIVE	
SPECIFICATION REFERENCE FS713/4	DATE MAR 96
REFERENCE NO. FO/2	DATE MAY 03
PREVIOUS EDITION. FO/1	DATE MAR 96

PRODUCT SPECIFICATION

Product Name	Formaldehyde	
	SALES SPECIFICATION	
GRADE	**CONCENTRATE**	**DILUTE**
FORMALDEHYDE (%WW)	Up to 24%	Up to10%
APPEARANCE	BLUE SOLUTION	BLUE SOLUTION
P H	3.0 – 5.0	3.0 – 5.0
MINIMUM STORAGE TEMP.	-10 °C	-10 °C
CONTAINER	2LTR SQUARE CONTAINER 1LTR DISPENSING TYPE CONTAINER	3LTR SQUARE CONTAINER

NOTES

Exclusion of Liability

Information contained in this publication is accurate to the best of the knowledge and belief of Blue Diamond

Any information or advice obtained from Blue Diamond otherwise than by means of this publication and whether relating to Blue Diamond materials or other materials, is also given in good faith. However, it remains at all times the responsibility of the customer to ensure that Blue Diamond materials are suitable for the particular purpose intended.

Blue Diamond accepts no liability whatsoever (except as otherwise provided by law) arising out of the use of information supplied, the application, adaptation or processing of the products described herein, the use of other materials in lieu of Blue Diamond materials or the use of Blue Diamond materials in conjunction with such other materials.

Health and Safety

A Material Safety Data Sheet has been issued describing the health, safety and environmental properties of this product, identifying the potential hazards and giving advice on the handling precautions and emergency procedures. This must be consulted fully before handling, storage and use.

SAFETY DATA SHEET

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND COMPANY

Product: FORMALDEHYDE SOLUTION
COMPANY: BLUE DIAMOND PRODUCTS TD
UNIT 2 OFF SMITHIES LANE
HECKMONDWIKE
W. YORKSHIRE
WF6 0PN
Tel No. 44(0)1924 410050 Fax No. 44(0)1924 235544
Emergency Tel No.44(0)1865 407333 TENNANTS DISTRIBUTION LIMITED

2. COMPOSITION/INFORMATION ON INGREDIENTS

Component Formaldehyde Methanol CAS No. EINECS No. % Symbol R Phrases 50-00-0 200-001-8 30 -55 T 23/24/25,34,40 (C3),43 67-56-1 200-659-6 1 – 13 F, T 11,23/24/25,39,23/24/25

3. HAZARDS IDENTIFICATION

Health/Physical Hazards Environmental Hazards Toxic by inhalation, in contact with skin and if swallowed. Contact with the respiratory system, eyes and skin will cause burns and may cause skin sensitisation. It is classified as EU Category 3 Carcinogen Toxic to aquatic organisms, may cause long term adverse effects in the aquatic environment. (See section 12)

4. FIRST AID MEASURES

First Aid - Eyes First Aid - Skin First Aid - Ingestion: First Air – Inhalation Personal Precautions Flush immediately with plenty of water for at least 15 minutes, keeping eyelids open and avoiding contamination of unaffected eye. Seek medical attention Wash immediately with plenty of water. Remove any contaminated clothing and launder before reuse. If irritation persists or develops, seek medical attention DO NOT induce vomiting! Rinse mouth out with water, but do not give anything to drink. Seek medical attention Remove patient to fresh air, allow to rest and keep warm. If not breathing, give artificial respiration and seek medical attention Ensure that those giving first aid treatments do not get contaminated by product spills, etc. Wear suitable protective clothing, gloves and safety goggles. See also Section 8

5. FIRE FIGHTING MEASURES

Extinguishing Media Unsuitable Extinguishing Media Special Exposure Hazards Protective Equipment for Fire Fighting Water spray or mist, foam, carbon dioxide or dry powder None Alert Fire Brigade! Will burn if involved in a fire and give off noxious fumes (e.g. formaldehyde and carbon oxides). Vapour is heavier than air and is an explosion hazard Self contained breathing apparatus and protective clothing. Prevent fire fighting water entering watercourses or ground water

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions Environmental Precautions Methods of Cleaning – On Soil Method of Cleaning – On Water Observe any warning labels on the container (see Section 14 and 15). Wear suitable protective clothing, gloves and safety goggles. See Section 8 for details Prevent from entering sewers or the immediate environment. In case of large spill, inform local police, local authority, water company, National Rivers Authority and/or fire brigade as appropriate Contain any spilled material immediately with dry agent (e.g. sand, earth, vermiculite etc), neutralise to hexamine if necessary with 5% ammonia and vacuum or shovel carefully into labelled containers for disposal (see Section 13). Use the TREMCARD system data for substantial spillages in public places None known

7. HANDLING AND STORAGE

Handling Storage Avoid contact with skin, eyes and clothing. Do not eat or drink during handling. Remove contaminated clothing and launder before re-use. Store away from oxidising agents. Store at a temperature sufficiently high to avoid the formation of polymers (See the manufacturers product literature) General or local exhaust ventilation should be used to control airborne levels

(aerosols/mists)

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational Exposure Limits Monitoring Procedures Personal Protection Skin Protection Eye Protection Hand Protection 2.5 8h TWA STEL 2.5 (15 min) UK (MEL) Ireland, Greece 1.2 8h TWA Finland (ceiling) 1.5 8h TWA 3 (15 min) Holland 0.6 8h TWA Norway (ceiling), Sweden 0.5 8h TWA 1.2 (5 min) Germany, Switzerland, France 0.4 8h TWA Denmark (ceiling) 0.3 ppm 8h TWA US-ACGIH, proposed None specified Always check applicability with your supplier of protective equipment Personal exposure must be controlled to conform with local/national regulations (see above). If this is not possible, respiratory protection must be worn. Full face respirator conforming to EN141, Type A or self contained breathing apparatus should be used Chemically resistant protective overall or apron, and rubber boots Full face visor Butyl rubber, nitrile, Viton gloves Note: Break through times can vary depending on thickness, use and source. Change gloves regularly

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State Odour pH (concentrated product) Melting Point ^{o}C Boiling Point/Range ^{o}C Flash Point ^{o}C Explosive Properties Oxidising Properties Vapour Pressure mmHg at 35^{o}C Density at 20^{o}C kg/m^{3} Solubility In Water Solubility In Solvents Partition Co Efficient log Pow Colourless liquid Irritating, pungent 2.5 – 5.5 -15 Approx 96 – 101 83 Approx Upper Limit In Air = 73% - For Formaldehyde Gas Lower Limit In Air = 7% None 2.7 1090 – 1160 Miscible in all proportions Soluble in ethanol, low in fatty type solvents 0.35, for formaldehyde gas

10. STABILITY AND REACTIVITY

Stability Conditions to Avoid Materials to Avoid Hazardous Decomposition Products Stable under normal conditions of use Store between 30 – 60^{o}C, otherwise may polymerise. Avoid naked flames and other sources of ignition (evolves flammable gas at elevated temperatures) Strong oxidising agents. Vapour may react with hydrochloric to form bis- chloromethyl ether, a potent human carcinogen. The solution may become discoloured on contact with metals and alloys containing zinc, iron, copper and nickel, which may become corroded Formaldehyde (forms explosive mixture with air) may be evolved on heating, and carbon oxides may be released on burning or heating to decomposition

11. TOXICOLOGICAL INFORMATION

Acute Effects Eyes Skin Ingestion Inhalation Chronic Effects Skin Inhalation Data for active ingredient Formaldehyde Contact can cause severe irritation with permanent damage LD50 (dermal, rabbit)L 270 mg/kg Toxic in contact and can cause skin burns LD50 Oral, rat: 100 mg/kg Toxic if swallowed and can cause irritation and burns to throat, nose and gastrointestinal tract LC50 Inhalation, rat: 203 mg/m3 Classified as toxic by inhalation. Also can cause severe irritation of the respiratory tract May cause allergic contact dermatitis reaction by skin contact (type IV immune reaction, acute and chronic skin sensitisation). Persons sensitised to formaldehyde should not handle this product Classified as a Category 3 carcinogen in the EU, mainly on grounds of inhalation experiments in animals that led to nasal cancer. However, this is not proven in humans there appears to be not definitive excess of lung cancer. Based on epidemiological evidence, no chronic adverse effects will be produced when working at below the UK MEL, although irritant effects may be experienced

12. ECOLOGICAL INFORMATION

Aquatic Toxicity Bacterial Toxicity Environmental Effects WGK LC50 Pimephales promelas 96h 24 mg/l EC50 Daphnia Magna 48h -2 mg/l EC50 Photobacterium phosphoreum 30 min 8.5 mg/l Toxic for aquatic organisms. Disinfect effect. Sludge decomposition impaired or not possible even in diluted concentration Biodegradable in soil and water and not bio-accumulative. Not acutely toxic to vertebrate animals, but exerts activity against invertebrates, e.g. bacteria 2 Water Polluting This ecological assessment is calculated fro data available on the components of the formulation and is not necessarily identical to the EC classification risk phrases

13. DISPOSAL CONSIDERATIONS

Disposal Of Product Disposal Of Packaging Users should acquaint themselves with local regulations. This product comes under European Waste Codes H6, H8 and H11, therefore, waste is considered hazardous waste if it contains ≥1% product; European Waste Catalogue Index No.07 01 99, if not mixed with other waste Disposal is usually carried out by incineration by a licensed waste material processor; stack gases may need to be scrubbed (see Section 5) Contaminated packing should be disposed of a Special Waste, as above, according to local authority guidelines

14. TRANSPORT INFORMATION

UN No. Proper Shipping Name ADR/RID Transport Hazard Label RID/ADR Classification Packaging Group TREMCARD HIN EAC IMDG Transport Hazard Label IMO IMDG Class Packaging Group EmS Code(s) Maritime Pollutant ICAO/IATA Transport Hazard Label ICAO/IATA Classification Packing Group ERG Code Packing Instructions Packing Instructions Max. net qty/package 2209 Formaldehyde Solution Corrosive 8 III 80S2209 80 2Z (tanks only) Corrosive 8 III FA, SB No Corrosive 8 III 8i Y818, 818 (Passenger Aircraft) 820 (Cargo Aircraft) 5 Litres (1 Litre Non UN Packs) (Passenger Aircraft) 60 Litres (Cargo Aircraft)

15. REGULATORY INFORMATION

EU Labelling Information Symbol(s) Designation of Danger R Phrases S Phrases Formaldehyde Solution (30 – 55%) T Toxic, Corrosive R23/24/25 Toxic by inhalation, in contact with skin and if swallowed R34 Causes burns R40 Limited evidence of a carcinogenic effect R43 May cause sensitisation by skin contact S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice S36/37/39 Wear suitable protective clothing, gloves and eye/face protection S45 In case of accident or if you feel unwell, seek medical advice

immediately (show the label where possible)
S51 Use only in well ventilated areas

16. OTHER INFORMATION

The Safety Data Sheets have been amended throughout to comply with CHIP III. The Specification remains the same.
Revision Date: 19/05/03