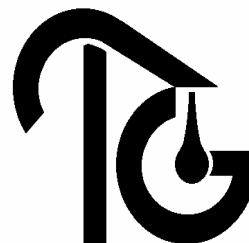


# TENNANTS DISTRIBUTION LIMITED

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## PRODUCT DATA SHEET

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

<b>PRODUCT</b>	<b>FORMALDEHYDE 10%</b>		
CAS NO.	50-00-0		
TARIFF NO.	291211000		
U.N NO.	2810		
EINECS NO.	200-001-8		
IMCO CLASS	3 TOXIC		
HAZARDS	HARMFUL CATEGORY 3 CARCINOGEN		
SPECIFICATION REFERENCE	FO10/1	DATE OCT 01	
REFERENCE NO.	FO10/1	DATE MAY 03	
PREVIOUS EDITION.		DATE	

## PRODUCT SPECIFICATION

Product Name                      Formaldehyde 10%  
 Alternative Name  
 Product Grade

### SALES SPECIFICATION

Formaldehyde Content (% w/w)	9.5 – 10.5
Methanol Content (% w/w)	1.0 max
Acidity (as Formic Acid) (% w/w)	0.05 max
Relative Density 25/25°C	1.029 – 1.031
Iron as Fe (ppm max)	2
Optical Density	0.017 nm max
Appearance	Water white solution
Minimum Storage Temperature	-10°C*

\*For 30 day shelf-life at constant temperature. Temperatures relate to stabilised solutions. Merchants and distributors are recommended to store formaldehyde solutions at least 5 to 10°C above these temperatures to ensure good condition when re-sold. Excessively high temperatures (especially above ca. 50°C) should be avoided wherever possible to minimise acidity increase).

### NOTES

#### **Exclusion of Liability**

Information contained in this publication is accurate to the best of the knowledge and belief of Tennants.

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

Tennants 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 Tennants materials or the use of Tennants 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 10%		
COMPANY:	TENNANTS DISTRIBUTION LIMITED		
	Hazelbottom Road	Botany Way	
	Cheetham	Purfleet	
	Manchester	Essex	
	M8 0GR	RM19 1SN	
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	Emergency Tel No.	01865 407333	

### 2. COMPOSITION/INFORMATION ON INGREDIENTS

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

### 3. HAZARDS IDENTIFICATION

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

### 4. FIRST AID MEASURES

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

### 5. FIRE FIGHTING MEASURES

Extinguishing Media	Water, spray or mist, foam, carbon dioxide or dry powder
Unsuitable Extinguishing Media	None
Special Exposure Hazards	Alert fire brigade! Aqueous solution will burn if involved in a fire and allowed to dry out and give off noxious fumes (e.g. formaldehyde and carbon oxides). Vapour is heavier than air and is an explosion hazard
Protection For Fire Fighters	Self contained breathing apparatus and protective clothing. Prevent fire fighting water entering water courses or groundwater

### 6. ACCIDENTAL RELEASE MEASURES

Personal Precautions	Observe any warning labels on the container (see Sections 14 and 15). Wear suitable protective clothing, gloves and safety goggles. See Section 8 for details
Environmental Precautions	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
Methods of Cleaning – Soil	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
Method of Cleaning - Water	None known

### 7. HANDLING AND STORAGE

Handling	Avoid contact with skin and eyes. Do not ingest. Handle/weigh this product under conditions of good local exhaust ventilation to avoid breathing fumes of aerosol. If this is not possible, use personal protective equipment (see Section 8)
Storage	Keep in original containers. Store in a well ventilated place, protect from frost

and replace lid after use. Avoid naked flames and other sources of ignition

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational Exposure Limits	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
Monitoring Procedures	None specified
Personal Protection	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
Skin Protection	Chemically resistant protective overall or apron, and rubber boots
Eye Protection	Full face visor
Hand Protection	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	Colourless liquid
Odour	Irritating, pungent
pH (concentrated product)	2.5 – 6.5
Melting Point °C	-15 approx
Boiling Point/Range °C	96 – 101
Flash Point °C	83 Approx
Explosive Properties	Upper limit in air = 73% - for formaldehyde gas Lower limit in air = 7%
Oxidising Properties	None
Vapour Pressure mm Hg at 35°C	2.7
Density at 20°C kg/m <sup>3</sup>	1090 – 1160
Solubility In Water % by weight	Miscible in all proportions
Solubility In Solvents	Soluble in ethanol, low in fatty type solvents
Partition Co Efficient (log Pow)	0.35 for formaldehyde gas
Note	These are typical values and do not constitute a specification

## 10. STABILITY AND REACTIVITY

Stability	Stable under normal conditions of use
Conditions To Avoid	Do not freeze (may polymerise). Avoid naked flames and other sources of ignition (evolves flammable gas at elevated temperatures)
Materials To Avoid	Strong oxidising agents. Vapour may react with hydrochloric acid 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
Hazardous Decomposition Products	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	Data for active ingredient Formaldehyde
Eyes	Contact can cause severe irritation with permanent damage
Skin	LD50 (dermal, rabbit) 270 mg/kg Toxic in contact and can cause skin burns
Ingestion	LD50 Oral, rat: 100 mg/kg Toxic if swallowed and can cause irritation and burns to throat, nose and gastrointestinal tract
Inhalation	LC50 Inhalation, rat: 203 mg/m <sup>3</sup> Classified as toxic by inhalation. Also can cause severe irritation of the respiratory tract
Chronic Effects	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
Skin	Classified as a Category 3 carcinogen in the EU, mainly on grounds of

Inhalation	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
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## 12. ECOLOGICAL INFORMATION

Aquatic Toxicity	LC50 Pimephales promelas 96h 24 mg/l EC50 Daphnia Magna 48h -2 mg/l
Bacterial Toxicity	EC50 Photobacterium phosphoreum 30 min 8.5 mg/l
Environmental Effects	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
WGK	2 Water Polluting This ecological assessment is calculated from 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	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 $\geq 1\%$ 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)
Disposal Of Packaging	Contaminated packing should be disposed of a Special Waste, as above, according to local authority guidelines

## 14. TRANSPORT INFORMATION

UN No.	2810
Proper Shipping Name ADR/RID	TOXIC LIQUID, ORGANIC, N.O.S. (CONTAINS FORMALDEHYDE)
Transport Hazard Label	Toxic
RID/ADR Classification	6.1
Packaging Group	III
TREMCARD	61GT1-III
HIN	60
EAC	2X (tanks only)
IMDG	
Transport Hazard Label	Toxic
IMO-IMDG Class	6.1
Packaging Group	III
EmS Code(s)	FA, SA
Marine Pollutant	No
ICAO/IATA	
Transport Hazard Label	Toxic
Classification	6.1
Packing Group	III
ERG Code	6L
Packing Instructions	Y611, 611 (passenger aircraft)
Packing Instructions	618 (cargo aircraft)
Max. Net Quantity/Package	60 litres (2 litres non EU packs) (passenger aircraft) 220 litres (cargo aircraft)

## 15. REGULATORY INFORMATION

Supply Classification	Xn Harmful
Risk Phrases	R20/21/22 Harmful by inhalation, in contact with skin and if swallowed R36/37/38 Irritating to eyes, respiratory system and skin R40 Limited evidence of a carcinogenic effect R43 May cause sensitisation by skin contact
Safety Phrases	S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice S36/37 Wear suitable protective clothing and gloves

<b>16. OTHER INFORMATION</b>