

Safety data

^1. IDENTIFICATION OF THE SUBSTANCE AND COMPANY

PRODUCT NAME	OCTANAL
ALTERNATIVE NAMES	ALDEHYDE C8 OCTYL ALDEHYDE 1-OCTANAL
^CAS No	124-13-0
^EC No	204-683-8
^REACH REGISTRATION No	Yet to be registered
FORMULA	CH ₃ (CH ₂) ₆ CHO
MOLECULAR WEIGHT	128.22

COMPANY: TENNANTS FINE CHEMICALS LTD

Macclesfield Road
Leek
Staffordshire UK
ST13 8LD

Tel: +44 (0)1538 392130
Fax: +44 (0)1538 399025
Emergency Tel: +44 (0)1538 392198
Email contact:

ian.bowdery@tennantsfinechemicals.com

Recommended Use of the Product

Fragrance ingredient

^2. HAZARD CLASSIFICATION

^CLASSIFICATION (DSD 67/548/EE)	R10; Xi, R36/38, R52/53 (See section 15 for Risk Phrases)	
^CLASSIFICATION (CLP 1272/2008)	Physical	Flammable/ Cat.3 - H226
	Health	Skin irritancy/Cat.2 - H315 Eye irritancy/Cat.2 - H319
	Environmental	Chronic toxic/ Cat. 3 - H412

^LABEL IN ACCORDANCE WITH (EC) NO. 1272/2008



^SIGNAL WORD

Warning

Warning

HAZARD STATEMENTS	H226	Flammable liquid and vapour
	H315	Causes skin irritation
	H319	Causes serious eye irritation
	H412	Harmful to aquatic life with long lasting effects
PRECAUTIONARY STATEMENTS	P210	Keep away from heat/spark/open flames/hot surfaces. –No smoking.
	P241	Use explosion proof electrical/ventilating/lighting equipment
	P264	Wash hands thoroughly after handling
	P273	Avoid release to the environment
	P280	Wear protective gloves/ protective clothing/ eye protection/ face protection.

For more details see Sections 8, 11, 14 and 15.

^3. COMPOSITION/INFORMATION ON INGREDIENTS

CAS No.	Ingredient Name	Content (%)	EC No.
124-13-0	Octanal	>99	204-683-8

^There are no impurities present at a level that require to be included under CLP Regulation EC 1272/2008.

Amendment to Sections 1, 2, 3, 12 & 15 on Issue K (marked ^)

4. FIRST AID MEASURES

EYE CONTACT	Rinse continuously with water for at least 10 minutes.
SKIN CONTACT	Shower immediately and remove contaminated clothing.
INHALATION	Fresh air and rest.
INGESTION	Rinse mouth with water and give small amounts of water to drink. NEVER GIVE AN UNCONSCIOUS PATIENT WATER TO DRINK. DO NOT INDUCE VOMITING. SEEK IMMEDIATE MEDICAL ATTENTION.
OTHER	For all exposures to undiluted material seek medical advice. Show medical staff substance data sheet or ensure information accompanies patient.

5. FIRE FIGHTING MEASURES

HAZCHEM CODE (UK Only)

3Y	Use foam Danger of violent reaction or explosion. Breathing apparatus for fire only. Contain.
EXTINGUISHING MEDIA	CO2, Powder, Alcohol-resistant foam, Water fog/spray.

SPECIAL FIRE FIGHTING PROCEDURES Wear self contained breathing apparatus

UNUSUAL FIRE & EXPOSURE HAZARDS

If spilt material is mopped up with a rag, the high surface area of the material can allow autoignition at room temperature. See section 6

6. ACCIDENTAL RELEASE MEASURES

Recover materials if possible. Also absorb spilled substance in sand or inert substance and remove to a safe place. Prevent material entering drains with absorbent socks and drain protectors. After absorption and recovery, wash away traces with large amounts of water. Any absorbent material used to mop up a spill must be thoroughly wetted and disposed of in a closed metal container.

Protective Equipment to be worn for spill – Chemical splash resistant overalls, Wellingtons or boots, chemical resistant PVC gauntlets and organic vapour respirator.

7. HANDLING AND STORAGE

HANDLING

Use in well ventilated areas. Keep containers tightly closed when not in use. Open and handle containers with care. Store in original containers. Keep away from sources of ignition. Avoid excessive breathing of vapours. See Section 8 for recommended exposure levels. Emergency shower and eyewash should be close by. Transfer and handle under inert and dry atmosphere. Avoid accumulation of static charge and keep away from sources of ignition. Electrical equipment to be suitable for electrical apparatus group and temperature class of the material (see Section 9).

STORAGE

Store away from oxidising agents. Suitable storage material – 316 Stainless Steel. Suitable seals - Perfluoroelastomer (Kalrez), suitable gaskets – graphite supported on 316 Stainless steel or asbestos free aramid fibre composite. Storage tanks to have flame trap and to be banded to contain 110% of tank contents, or as local regulations.

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

VENTILATION

Engineering controls should be aimed for to prevent the need for ventilation, however if this is not possible and the undiluted product is used in a confined space, then good ventilation must be employed.

PROTECTIVE EQUIPMENT

For normal operation of undiluted product, (see section 6 for spill).

BREATHING

Under normal conditions respiratory protection is not required. If the exposure limit is likely to be exceeded, wear full face chemical respirator with organic vapour cartridge CEN141. See below for exposure limit.

PROTECTIVE GLOVES

Use protective gloves/gauntlets made of PVC.

EYE PROTECTION

Wear close fitting goggles or visor when handling, e.g. sampling.

OTHER PROTECTION

Wear normal industrial workwear to prevent skin contact.

WORKPLACE EXPOSURE LIMITS

There is not a workplace exposure standard set in the UK by the HSE in EH40, nor Europe nor the USA. Tessenderlo Fine Chemicals has set an internal Company Exposure Standard (CES).

These are: - 20 ppm/8h 106 mg/m³/8h 20 ppm/15min 106 mg/m³/15min

9. PHYSICAL AND CHEMICAL PROPERTIES

Colour	Colourless
State at 20°C	Liquid
Odour	Fruity
Solubility in water at 20°C (%)	0.1% (measured)
Solubility of water in product at 20°C (%)	0.82% (measured)
Specific Gravity at 20°C	0.82
Evaporation Rate (Butyl Acetate = 1) at 20°C	0.08
Vapour Pressure at 20°C	158 Pa
Vapour Density (Air = 1)	4.4
Melting Point	<-14°C
Boiling Point	163 °C
Viscosity	Not Determined
Flash Point	51.6 °C (Closed Cup)
Auto Ignition Temperature	>250°C, but see section 5
Flammability Limit - Lower	Not Determined
Flammability Limit - Upper	Not Determined
Decomposition Temperature	Not Determined
Odour Threshold	0.015 mg/m ³
Henry's Law Constant	51.4 Pa m ³ /mol (measured)
Electrical Conductivity	0.187 µS/cm
Gas Group and Temperature Class	Group IIB Class T3
Log Octanol/Water Partition Coefficient	3.5 (measured)

10. STABILITY AND REACTIVITY

STABILITY TO HEAT	Stable above 0°C and at least up to 120°C in the absence of air.
REACTIVITY	Reacts with oxidising agents. Upon exposure to air, slowly oxidises to the acid.
REACTION WITH WATER	None
POLYMERISATION HAZARD	None

11. TOXICOLOGICAL INFORMATION

TOXICOLOGICAL DATA	LD ₅₀ Oral (rats) 5630 mg/kg LD ₅₀ Dermal (rabbits) 6350 mg/kg LC ₅₀ Inhalation (rats) Saturated air for 8h, no deaths Irritation Dermal (rabbits) 0.5 ml/4h test score 2.6 - irritant Irritation Eye (rabbits) 0.1 ml test score cornea 1, iris 0, conjunctivae redness 2, chemosis 2 - irritant. Sensitisation Patch test (0.25% solution) produced no sensitisation in humans
--------------------	--

ACUTE & CHRONIC HEALTH HAZARDS

ACUTE EFFECTS

EYE CONTACT	Irritant.
SKIN CONTACT	Irritant.
INHALATION	Strong odour therefore unlikely enough can be inhaled to cause a significant health effect.
INGESTION	None
CHRONIC EFFECTS	None
CARCINOGENICITY	Ames test negative.

^12. ECOLOGICAL INFORMATION

MOBILITY:	The Henry's Law Constant (from Section 9) shows that there is no clear partition between air and water. ^The Soil adsorption coefficient Koc has been calculated as 1900, which suggests binding to soil will be high
BIODEGRADABILITY:	BOD ₅ /COD ratio >50%. However OECD 301C test showed that it was not readily biodegradable.
BIOACCUMULATION:	Bioconcentration factor has been estimated to be 269, which suggests bioaccumulation is significant.
AQUATIC TOXICITY:	There is no acute aquatic toxicity data available. However there is sub chronic data as follows. LC ₅₀ 336h Guppy 7.9 mg l ⁻¹ . Extrapolating this sub chronic to acute level, it is almost certain that the 96h data would have shown a value between 10 mg l ⁻¹ and 100 mg l ⁻¹ . So Octanal is most likely to be harmful to aquatic life.
^SUMMARY:	Based on the above data, it is not classified as dangerous to the environment, but is chronic category 3. It is neither a PBT nor a vPvB. IFRA Labelling Manual allocates this classification.

13. DISPOSAL CONSIDERATIONS

Waste Product	Recycle if possible, but if not, then incineration is recommended since the material is odiferous.
Packaging	Steel drums can be cleaned and re-used if in good condition, or recycle as scrap metal. Plastic IBC bodies will pick up odour, so re-use will not be possible. Either clean out, shred and landfill, if permitted or clean, granulate and recycle the plastic granules.

NOTE

Incineration must be carried out in a suitable high temperature incinerator operated by a registered disposal company. User must ensure that this complies with all local /National laws.

14. TRANSPORT INFORMATION

UN No.	1191
Proper Shipping Name	Octyl Aldehydes (1-Octanal)
PACKING GROUP	Group III Minor danger
ADR/AIR/SEA CLASS No.	3
ADR HAZARD ID No.	30
SUBSIDIARY CLASS (ALL MODES)	Not Classified
FLASH POINT	51.6°C
HAZCHEM	3Y



LABEL FOR CONVEYANCE

^15. REGULATORY INFORMATION

^ TEXT FOR RISK PHRASES UNDER DSD

	Numbers	Text
Risk Phrases	10	Flammable.
	36/38	Irritating to eyes and skin.
	52/53	Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Relevant Regulations

^Classification, labelling and packaging of substances and mixtures Regulation EC 1272/2008, currently at 1st Adaptation

Dangerous Substances Directive 67/548/EEC, currently at 8th Amendment and 29th Adaptation

Dangerous Preparations Directive 1999/45/EC, currently at 2nd Adaptation

Registration, Evaluation, Authorisation and restriction of Chemicals (REACH) Regulation 1907/2006

Cosmetics Directive 76/768/EEC, currently at 7th Amendment and latest Adaptation 2006/65/EC

^Listed on the following Inventories:- TSCA (USA), DSL (Canada), EINECS (Europe), AICS (Australia), ECL (Korea), PICCS (Philippines) & ENCS (Japan), ASIA-PAC, NZIoC (New Zealand)

NFPA Rating Codes (US) Health – 1, Flammability – 2, Reactivity – 0.

16. OTHER INFORMATION

INFORMATION SOURCES

References and data sources can be supplied on request.

COMMENTS

While Tennants Fine Chemicals endeavour to ensure that all advice given relating to the use and/or application of our products (whether in this leaflet or otherwise) is both correct and useful, the information is based partly on data made available to us from other sources and is not guaranteed as accurate. It is not intended in any way to be exhaustive or as a substitute for the customers own product testing, evaluation and safety procedures.

If you have any queries over the suitability or safety precautions required for your particular application, please contact us and we will endeavour to assist you further. Customers who make use of the product without contacting us do so at their own risk.

The information contained in this leaflet is under continuous review and liable to be modified from time to time.

NAME MR I BOWDERY
POSITION ENVIRONMENTAL ADVISOR