1. IDENTIFICATION

Product Name	**Trifluralin**
Other Names	2,6-Dinitro-N,N-Dipropyl-4-Trifluoromethylaniline; Benzenamine; BENZENAMINE,2,6-DINITRO-N,N-DIPROPYL-4-(TRIFLUOROMETHYL)-; Trifluralin.
Uses	Herbicide, especially for cotton plant.
Chemical Family	No Data Available
Chemical Formula	C13H16F3N3O4
Chemical Name	Trifluralin
Product Description	No Data Available

Contact Details of the Supplier of this Safety Data Sheet

Organisation	Location	Telephone
Redox Pty Ltd	2 Swettenham Road Minto NSW 2566 Australia	+61-2-97333000
Redox Pty Ltd	11 Mayo Road Wiri Auckland 2104 New Zealand	+64-9-2506222
Redox Inc.	3960 Paramount Boulevard Suite 107 Lakewood CA 90712 USA	+1-424-675-3200
Redox Chemicals Sdn Bhd	Level 2, No. 8, Jalan Sapir 33/7 Seksyen 33, Shah Alam Premier Industrial Park 40400 Shah Alam Sengalor, Malaysia	+60-3-5614-2111

Emergency Contact Details

For emergencies only; DO NOT contact these companies for general product advice.

Organisation	Location	Telephone
Poisons Information Centre	Westmead NSW	1800-251525 131126
Chemcall	Australia	1800-127406 +64-4-9179888
Chemcall	Malaysia	+64-4-9179888
Chemcall	New Zealand	0800-243622 +64-4-9179888
National Poisons Centre	New Zealand	0800-764766
CHEMTREC	USA & Canada	1-800-424-9300 CN723420 +1-703-527-3887

2. HAZARD IDENTIFICATION

Poisons Schedule (Aust) No Data Available

Safe Work Australia
Approved Criteria for Classifying Hazardous Substances (NOHSC:1008(2004))

Hazard Classification	Hazardous according to the criteria of Safe Work Australia [NOHSC:1008(2004)]	
Hazard Categories	**N**	Dangerous For The Environment
	Carc. 3	Carcinogenic Cat. 3

Safe Work Australia
National Code of Practice for the Labelling or Workplace Substances (NOHSC:2012(1994))

Risk Phrases	**R40**	Limited evidence of a carcinogenic effect.
	R43	May cause sensitisation by skin contact.
	R50/53	Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
Safety Phrases	**S36/37**	Wear suitable protective clothing and gloves.
	S46	If swallowed, seek medical advice immediately and show this container or label.
	S60	This material and its container must be disposed of as hazardous waste.
	S61	Avoid release to the environment. Refer to special instructions/Material Safety Data Sheets.

National Transport Commission (Australia)
Australian Code for the Transport of Dangerous Goods by Road & Rail (ADG Code)

Dangerous Goods Classification	NOT Dangerous Goods according to the criteria of the Australian Code for the Transport of Dangerous Goods by Road & Rail (ADG Code)	

Environmental Protection Authority (New Zealand)
Hazardous Substances and New Organisms Amendment Act 2015

HSNO Classifications	Health Hazards	**6.1D**	Substances that are acutely toxic - Harmful
		6.4A	Substances that are irritating to the eye
		6.5B	Substances that are contact sensitisers
		6.9A	Substances that are toxic to human target organs or systems
	Environmental Hazards	**9.1A**	Substances that are very ecotoxic in the aquatic environment
		9.2A	Substances that are very ecotoxic in the soil environment

3. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients

Chemical Entity	Formula	CAS Number	Proportion
Trifluralin	No Data Available	1582-09-8	95 %
1,3-dichloro-2-nitro-5- (trifluoromethyl)benzene	No Data Available	400-70-4	<0.5 %
2-chloro-6-nitro-N,N-dipropyl-4- (trifluoromethyl)aniline	No Data Available		<0.5 %
2,6-dinitro-4-(trifluoromethyl)aniline	No Data Available	445-66-9	<0.3 %
Moisture	No Data Available	7732-18-5	<0.3 %
Sulphuric Acid	No Data Available	7664-93-9	<0.2 %
N-nitroso-di-n-propylamine (NDPA) (Toxicologically significant ingredient)	No Data Available	621-64-7	<1g/Kg %

4. FIRST AID MEASURES

Description of necessary measures according to routes of exposure

Swallowed	Rinse mouth with water. Give water to drink. Do NOT induce vomiting. If symptoms develop, seek medical attention.
Eye	Flush eyes thoroughly with water for several minutes. Remove contact lenses after initial 1-2 minutes and continue flushing for several additional minutes. If effects occur, consult a physician, preferably an ophthalmologist.
Skin	Remove contaminated clothing. Wash affected area with plenty of water. If irritation persists, seek medical attention.
Inhaled	Remove victim from exposure to fresh air. If not breathing, apply artificial respiration. If breathing is difficult, give oxygen. Seek medical attention.Seek medical attention.
Advice to Doctor	Treat symptomatically based on individual reactions of patient and judgement of doctor.
Medical Conditions Aggravated by Exposure	SYSTEMIC EFFECTS: In animals, effects have been reported on the following organs: blood, kidney and liver. CARCINOGENICITY: Group 3 Carinogen according to IARC Monographs Not Classifiable as to carcinogenicity to humans. A low incidence of urinary tract tumors was seen in only 1 of 5 chronic studies in rats with Trifluralin. Trifluralin is not anticipated to be a carcinogenic risk to man. TERATOLOGY: Birth defects are unlikely. Exposures having no effect (BIRTH DEFECTS)on the mother should have no effect on the foetus. Did not cause birth defects in animals; other effects were seen in the foetus only at doses which caused toxic effects to the mother. REPRODUCTIVE EFFECTS: Did not interfere with reproduction in laboratory animal studies.

5. FIRE FIGHTING MEASURES

General Measures	Clear fire area of all non-emergency personnel. Stay upwind. Keep out of low areas. Eliminate ignition sources. Move fire exposed containers from fire area if it can be done without risk.
Flammability Conditions	Product is a combustible solid.
Extinguishing Media	Water fog or fine spray, carbon dioxide, dry chemical, foam. Do not use direct warm stream as it will spread fire. General purpose synthetic foams (including AFFF type) or protein foams may be used. Alcohol resistant foams (ATC type) may also function. Keep people away. Isolate fire area and deny unnecessary entry. Fight fire from protected location or safe distance. Consider use of unmanned hose holder or monitor nozzles. Do not use direct water stream. May spread fire. Burning liquids may be moved by flushing with water to protect personnel and minimize property damage. Hand held carbon dioxide or dry chemical extinguishers may be used for small fires.Dust explosion hazard may result from forceful application of fire extinguishing agents. Cool surroundings with water to localize fire zone. Use water spray to cool fire exposed containers and fire affected zone until fire is out and danger of re-ignition has passed. Immediately withdraw all personnel from area in case of rising sound from venting safety device or discoloration of the container.
Fire and Explosion Hazard	Container may vent and/or rupture due to fire. Violent steam generation or eruption may occur upon application of direct water stream to hot liquids. Dense smoke is produced when product burns. Do not permit dust to accumulate. Dust layers can be ignited by spontaneous combustion or other ignition sources. When suspended in air, dust can pose an explosion hazard.
Hazardous Products of Combustion	During a fire,smoke may contain the original material in addition to unidentified toxic and/or irritating compounds. Hazardous combustion products may include and are not limited to carbon dioxide, carbon monoxide, nitrogen oxides and hydrogen fluoride.
Special Fire Fighting Instructions	Do NOT allow fire fighting water to reach waterways, drains or sewers. Store fire fighting water for treatment.
Personal Protective Equipment	Fire fighters should wear a positive-pressure self-contained breathing apparatus (SCBA) and protective fire fighting clothing (includes fire fighting helmet, coat, trousers, boots and gloves).
Flash Point	53 °C Open Cup
Lower Explosion Limit	No Data Available
Upper Explosion Limit	No Data Available
Auto Ignition Temperature	No Data Available
Hazchem Code	No Data Available

6. ACCIDENTAL RELEASE MEASURES

Avoid accidents, clean up immediately. May be slippery when spilt. Eliminate all sources of ignition. Increase

General Response Procedure	ventilation. Avoid generating dust. Stop leak if safe to do so. Isolate the danger area. Use clean, non-sparking tools and equipment.
Clean Up Procedures	Contain and sweep/shovel up spills with dust binding material or use an industrial vacuum cleaner. Transfer to a suitable, labelled chemical-waste container and dispose of promptly as hazardous waste.
Containment	Stop leak if safe to do so. Isolate the danger area.
Environmental Precautionary Measures	Do NOT let product reach drains or waterways. If product does enter a waterway, advise the Environmental Protection Authority or your local Waste Management.
Evacuation Criteria	Evacuate all unnecessary personnel.
Personal Precautionary Measures	Personnel involved in the clean up should wear full protective clothing as listed in section 8.

7. HANDLING AND STORAGE

Handling	Ensure an eye bath and safety shower are available and ready for use. Observe good personal hygiene practices and recommended procedures. Wash thoroughly after handling. Take precautionary measures against static discharges by bonding and grounding equipment. Avoid contact with eyes, skin and clothing. Do not inhale product dust/fumes. No smoking, open flames or sources of ignition in handling and storage area. Wash thoroughly with soap and water after handling.
Storage	Store in a cool, dry, well-ventilated area. Keep containers tightly closed when not in use. Inspect regularly for deficiencies such as damage or leaks. Protect against physical damage. Store away from incompatible materials including oxidizing agents and sources of ignition. Protect from direct sun- light, moisture and air. Do not contaminate food, water, or feed by storage or disposal. Store in original container below 45 Deg C. This product has a UN classification of 3077 and a Dangerous Goods Class 9 (Miscellaneous) according to the Australian Code for the Transport of Dangerous Goods By Road and Rail. NOTE: This product is subject to special provision AU01 according to The ADG7. SP No. AU01 Environmentally Hazardous Substances meeting the descriptions of UN 3077 or UN 3082 are not subject to this Code when transported by road or rail in; (a) packagings that do not incorporate a receptacle exceeding 500 kg(L); or (b) IBCs.
Container	Packaging must comply with requirements of Hazardous Substances (Packaging) Regulations 2001. Store in original packaging as approved by manufacturer.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

General	No exposure standard has been established for this product by the Australian Safety and Compensation Council (ASCC). However, the exposure standard for dust not otherwise specified is 10mg/m3 (for inspirable dust) and 3mg/m3 (for respirable dust). NOTE: The exposure value at the TWA is the average airborne concentration of a particular substance when calculated over a normal 8 hour working day for a 5 day working week. These exposure standards are guides to be used in the control of occupational health hazards. All atmospheric contamination should be kept to as low a level as is workable. These exposure standards should not be used as fine dividing lines between safe and dangerous concentrations of chemicals. They are not a measure of relative toxicity.
Exposure Limits	No Data Available
Biological Limits	No information available on biological limit values for this product.
Engineering Measures	A system of local and/or general exhaust is recommended to keep employee exposures as low as possible. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area. Adequate ventilation should be provided so that exposure limits are not exceeded.
Personal Protection Equipment	RESPIRATOR: Wear an approved particulate respirator when handling this product (AS1715/1716). EYES: Safety glasses with side shields (AS1336/1337). HANDS: Chemically resistant gloves (AS2161). CLOTHING: Long-sleeved protective coveralls and safety footwear (AS3765/2210)
Work Hygienic Practices	No Data Available

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Solid

Appearance	Crystalline Solid
Odour	Aromatic Solvent Odour
Colour	Bright Orange
pH	7.0
Vapour Pressure	6.1 *10^-3 Pa (@ 25 °C)
Relative Vapour Density	No Data Available
Boiling Point	139 - 140 °C
Melting Point	48.5 - 49 °C
Freezing Point	No Data Available
Solubility	No Data Available
Specific Gravity	1.258 g/cm3
Flash Point	53 °C Open Cup
Auto Ignition Temp	No Data Available
Evaporation Rate	No Data Available
Bulk Density	No Data Available
Corrosion Rate	No Data Available
Decomposition Temperature	No Data Available
Density	No Data Available
Specific Heat	No Data Available
Molecular Weight	No Data Available
Net Propellant Weight	No Data Available
Octanol Water Coefficient	(Log Pow): 5.34
Particle Size	No Data Available
Partition Coefficient	4.83 @20 Deg C
Saturated Vapour Concentration	No Data Available
Vapour Temperature	No Data Available
Viscosity	No Data Available
Volatile Percent	No Data Available
VOC Volume	No Data Available
Additional Characteristics	SOLUBILITY IN WATER: 0.184 mg/L (pH 5), 0.221 mg/L (pH 7), 0.189 mg/L (pH 9) all at 25 Deg C RELATIVE DENSITY: 1.36 @22 Deg C Product is solid at room temperature. Stable to hydrolysis at pH3, 6 and 9 (52 Deg C) Decomposed by u.v. irradiation
Potential for Dust Explosion	When suspended in air, dust can pose an explosion hazard.
Fast or Intensely Burning Characteristics	No Data Available
Flame Propagation or Burning Rate of Solid Materials	No Data Available
Non-Flammables That Could Contribute Unusual Hazards to a Fire	No Data Available
Properties That May Initiate or Contribute to Fire Intensity	No Data Available
Reactions That Release Gases or Vapours	Toxic flammable gases and heat are released under decomposition.
Release of Invisible Flammable Vapours and Gases	No Data Available

10. STABILITY AND REACTIVITY

Chemical Stability	Product is stable under normal conditions of use, storage and temperature. Unstable at elevated temperatures.

Conditions to Avoid	Avoid excessive heat, direct sunlight, static discharges, generating dust, moisture and temperatures above 70'C. Product can decompose at elevated temperatures. Generation of gas can cause pressure in closed systems. Pressure build-up can be rapid.
Materials to Avoid	Incompatible with oxidising agents, and sources of ignition.
Hazardous Decomposition Products	When involved in a fire, smoke may contain the original material in addition to unidentified toxic and/or irritating compounds. Hazardous combustion products may include and are not limited to carbon dioxide, carbon monoxide, nitrogen oxides, and hydrogen fluoride. Toxic flammable gases and heat are released under decomposition.
Hazardous Polymerisation	Hazardous polymerisation is not known to occur.

11. TOXICOLOGICAL INFORMATION

General Information	LD50 for skin absorption is >5000 mg/kg Oral LD50 is 2000->5000 mg/kg Inhalation LC50 is >4.8 mg/L for 4 hours Cancer information: A low incidence of urinary tract tumors was seen in only 1 of 5 chronic studies in rats with trifluralin. Trifluralin is not anticipated to be a carcinogenic risk to man. Teratology (birth defects): Birth defects are unlikely. Exposures having no effect on the mother should have no effect on the fetus. Did not cause birth defects in animals; other effects were seen in the fetus only at doses which caused toxic effects to the mother. Reproductive effects: Did not to interfere with reproduction in laboratory animal studies.
EyeIrritant	May cause slight eye irritation.
Ingestion	Low toxicity if swallowed. Small amounts swallowed incidental to normal handling operations are not likely to cause injury; however, swallowing larger amounts may cause injury.
Inhalation	Vapours are unlikely due to physical properties. No adverse effects are anticipated from single exposure to dust.
SkinIrritant	May cause sensitisation by skin contact. Skin contact may result in allergic skin reaction. Prolonged skin contact is unlikely to result in skin absorption of harmful amounts.
Carcinogen Category	No Data Available

12. ECOLOGICAL INFORMATION

Ecotoxicity	Material is very highly toxic to aquatic organisms on an acute basis (LC50 or EC50 <0.1mg/L in the most sensitive species tested). Mugil Cephalus (Common Mullet) LC50: 0.032mg/L Lepomis Macrochirus (Bluegill) LC50: 0.0084-0.40mg/L Oncorhynchus Mykiss (Rainbow Trout) LC50: 0.025-0.10mg/L Pimephales Promelas (Fathead Minnow) LC50: 0.105-0.160mg/L Ictalurus Punctatus (Channel Catfish) LC50: 0.440-2.20mg/L Acute Immobilisation Daphnia Magna EC50: 0.245-0.56mg/L Growth Inhibition EC50 in Duckweed: 0.048-0.17mg/L Growth Inhibition EC50 for Marine Diatom: 0.028mg/L Growth Inhibition Ec50 for blue-green algae: >0.339mg/L Growth Inhibition EC50 for Green algae: 0.67mg/L Acute contact LD50 in honey bee (Apis mellifera) is >100 µg/bee. Acute oral LD50 in honey bee (Apis mellifera) is >100 µg/bee. The LC50 in Earth worm: >1000mg/Kg
Persistence/Degradability	Based on the stringent test guidelines, this material cannot be considered as readily biodegradable; however, these results do not necessarily mean that the material is not biodegradable under environmental conditions. Under Aerobic soil conditions the half-life is 116-201 days. Under Anaerobic soil conditions the half-life is 25-59 days. The photolysis half-life in soil is 41 days. The photolysis half-life in water is 0.8 hours. Inhibitory concentration (IC50) in OECD Activated Sludge Respiration Inhibition Test (OECD Test No. 209) is >100mg/L.
Mobility	Potential for mobility in soil is slight (Koc between 2000 and 5000)
Environmental Fate	Do NOT allow product to reach waterways, drains and sewers.
Bioaccumulation Potential	Bioconcentration potential is moderate (BCF is between 100 and 3000 or Log Pow between 3 and 5). Bioconcentration Factor (BCF) in fish is 2280. Measured log octanol/water partition coefficient (Log Pow) is 5.34. Log Soil organic carbon partition coefficient (Log Koc) is 3.64-4.49.
	No Data Available

Environmental Impact

13. DISPOSAL CONSIDERATIONS

General Information	Dispose of in accordance with all local, state and federal regulations. All empty packaging should be disposed of in accordance with Local, State, and Federal Regulations or recycled/reconditioned at an approved facility.
Special Precautions for Land Fill	Contact a specialist disposal company or the local waste regulator for advice.

14. TRANSPORT INFORMATION

Land Transport (Australia)
ADG Code

Proper Shipping Name	TRIFLURALIN
Class	No Data Available
Subsidiary Risk(s)	No Data Available
EPG	47 Low To Moderate Hazard Substances
UN Number	No Data Available
Hazchem	No Data Available
Pack Group	No Data Available
Special Provision	SPAU01

Land Transport (Malaysia)
ADR

Proper Shipping Name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Trifluralin)
Class	9 Miscellaneous Dangerous Goods and Articles
Subsidiary Risk(s)	No Data Available
EPG	47 Low To Moderate Hazard Substances
UN Number	3077
Hazchem	2Z
Pack Group	III
Special Provision	No Data Available

Land Transport (New Zealand)
NZS5433

Proper Shipping Name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Trifluralin)
Class	9 Miscellaneous Dangerous Goods and Articles
Subsidiary Risk(s)	No Data Available
EPG	47 Low To Moderate Hazard Substances
UN Number	3077
Hazchem	2Z
Pack Group	III
Special Provision	No Data Available

Land Transport (United States of America)
US DOT

Proper Shipping Name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Trifluralin)
Class	9 Miscellaneous Dangerous Goods and Articles
Subsidiary Risk(s)	No Data Available
ERG	171 Substances (Low to Moderate Hazard)
UN Number	3077
Hazchem	2Z
Pack Group	III
Special Provision	No Data Available

Sea Transport
IMDG Code

Proper Shipping Name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Trifluralin)
Class	9 Miscellaneous Dangerous Goods and Articles
Subsidiary Risk(s)	No Data Available
UN Number	3077
Hazchem	2Z
Pack Group	III
Special Provision	No Data Available
EMS	FA,SF
Marine Pollutant	No

Air Transport
IATA DGR

Proper Shipping Name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Trifluralin)
Class	9 Miscellaneous Dangerous Goods and Articles
Subsidiary Risk(s)	No Data Available
UN Number	3077
Hazchem	2Z
Pack Group	III
Special Provision	No Data Available

National Transport Commission (Australia)
Australian Code for the Transport of Dangerous Goods by Road & Rail (ADG Code)

Dangerous Goods Classification	NOT Dangerous Goods according to the criteria of the Australian Code for the Transport of Dangerous Goods by Road & Rail (ADG Code)

15. REGULATORY INFORMATION

General Information	Classified as hazardous according to The Australian Safety and Compensation Council (ASCC) and Annex I European Directive 67/548/EEC. EINECS No: 216-428-8 Triflualin
Poisons Schedule (Aust)	No Data Available

Environmental Protection Authority (New Zealand)
Hazardous Substances and New Organisms Amendment Act 2015

Approval Code	HSR003428

National/Regional Inventories

Australia (AICS)	Listed
Canada (DSL)	Not Determined
Canada (NDSL)	Not Determined
China (IECSC)	Not Determined
Europe (EINECS)	Not Determined
Europe (REACh)	Not Determined
Japan (ENCS/METI)	Not Determined
Korea (KECI)	Not Determined
Malaysia (EHS Register)	Not Determined
New Zealand (NZIoC)	Not Determined
Philippines (PICCS)	Not Determined
Switzerland (Giftliste 1)	Not Determined
Switzerland (Inventory of Notified Substances)	Not Determined
Taiwan (NCSR)	Not Determined
USA (TSCA)	Not Determined

Additional Information ADG SPECIAL PROVISION 335: Mixtures of solids which are not subject to this Code and environmentally hazardous liquids or solids must be classified as UN 3077 and may be transported under this entry, provided there is no free liquid visible at the time the substance is loaded or at the time the packaging or transport unit is closed. Each transport unit must be leak proof when used as a bulk packaging. Sealed packets and articles containing less than 10 ml of an environmentally hazardous liquid, absorbed into a solid material but with no free liquid in the packet or article, or containing less than 10 g of an environmentally hazardous solid, are not subject to this Code.

16. OTHER INFORMATION

Related Product Codes TRIFLA2000, TRIFLA2001, TRIFLA2700, TRIFLA3000, TRIFLA3001

Revision 2

Revision Date 06 Nov 2014

Key/Legend

< Less Than
> Greater Than
AICS Australian Inventory of Chemical Substances
atm Atmosphere
CAS Chemical Abstracts Service (Registry Number)
cm² Square Centimetres
CO2 Carbon Dioxide
COD Chemical Oxygen Demand
deg C (°C) Degrees Celcius
EPA (New Zealand) Environmental Protection Authority of New Zealand
deg F (°F) Degrees Farenheit
g Grams
g/cm³ Grams per Cubic Centimetre
g/l Grams per Litre
HSNO Hazardous Substance and New Organism
IDLH Immediately Dangerous to Life and Health
immiscible Liquids are insoluable in each other.
inHg Inch of Mercury
inH2O Inch of Water
K Kelvin

kg Kilogram
kg/m³ Kilograms per Cubic Metre
lb Pound
LC50 LC stands for lethal concentration. LC50 is the concentration of a material in air which causes the death of 50% (one half) of a group of test animals. The material is inhaled over a set period of time, usually 1 or 4 hours.
LD50 LD stands for Lethal Dose. LD50 is the amount of a material, given all at once, which causes the death of 50% (one half) of a group of test animals.
ltr or **L** Litre
m³ Cubic Metre
mbar Millibar
mg Milligram
mg/24H Milligrams per 24 Hours
mg/kg Milligrams per Kilogram
mg/m³ Milligrams per Cubic Metre
Misc or **Miscible** Liquids form one homogeneous liquid phase regardless of the amount of either component present.
mm Millimetre
mmH2O Millimetres of Water
mPa.s Millipascals per Second
N/A Not Applicable
NIOSH National Institute for Occupational Safety and Health
NOHSC National Occupational Heath and Safety Commission
OECD Organisation for Economic Co-operation and Development
Oz Ounce
PEL Permissible Exposure Limit
Pa Pascal
ppb Parts per Billion
ppm Parts per Million
ppm/2h Parts per Million per 2 Hours
ppm/6h Parts per Million per 6 Hours
psi Pounds per Square Inch
R Rankine
RCP Reciprocal Calculation Procedure
STEL Short Term Exposure Limit
TLV Threshold Limit Value
tne Tonne
TWA Time Weighted Average
ug/24H Micrograms per 24 Hours
UN United Nations
wt Weight