

### 1. IDENTIFICATION

<b>Product Name</b>	<b>Nonyl Phenol (9 - 9.5 EO)</b>
<b>Other Names</b>	Nonyl Phenol 95EO; PANNOX 19; POLY(OXY-1,2-ETHANDIYL),.alpha.-(NONYLPHENYL)-.omega.-HYDROXY-; Polyethylene Glycol, Nonylphenyl Ether
<b>Uses</b>	Unspecified
<b>Chemical Family</b>	No Data Available
<b>Chemical Formula</b>	(C <sub>2</sub> H <sub>4</sub> O) <sub>n</sub> C <sub>15</sub> H <sub>24</sub> O
<b>Chemical Name</b>	Nonyl Phenol (9 - 9.5 EO)
<b>Product Description</b>	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

### Globally Harmonised System

<b>Hazard Classification</b>	Hazardous according to the criteria of the Globally Harmonised System of Classification and Labelling of Chemicals (GHS)
<b>Hazard Categories</b>	Acute Toxicity (Oral) - Category 4 Acute Toxicity (Dermal) - Category 5 Skin Corrosion/Irritation - Category 2 Serious Eye Damage/Irritation - Category 2A Toxic To Reproduction - Category 2 Specific Target Organ Toxicity (Repeated Exposure) - Category 2 Acute Hazard To The Aquatic Environment - Category 1 Long-term Hazard To The Aquatic Environment - Category 2

**Pictograms**



**Signal Word** Warning

<b>Hazard Statements</b>	<b>H302</b>	Harmful if swallowed.
	<b>H313</b>	May be harmful in contact with skin.
	<b>H315</b>	Causes skin irritation.
	<b>H319</b>	Causes serious eye irritation.
	<b>H361fd</b>	Suspected of damaging fertility. Suspected of damaging the unborn child.
	<b>H373</b>	May cause damage to organs through prolonged or repeated exposure.
	<b>H400</b>	Very toxic to aquatic life.
	<b>H411</b>	Toxic to aquatic life with long lasting effects.

<b>Precautionary Statements</b>	Prevention	<b>P201</b>	Obtain special instructions before use.
		<b>P202</b>	Do not handle until all safety precautions have been read and understood.
		<b>P260</b>	Do not breathe gas/mist/vapours/spray.
		<b>P264</b>	Wash contacted areas thoroughly after handling.
		<b>P270</b>	Do not eat, drink or smoke when using this product.
		<b>P273</b>	Avoid release to the environment.
		<b>P280</b>	Wear protective gloves/protective clothing/eye protection/face protection.
		<b>P281</b>	Use personal protective equipment as required.
	Response	<b>P301 + P312</b>	IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
		<b>P302 + P352</b>	IF ON SKIN: Wash with plenty of soap and water.
		<b>P305 + P351 + P338</b>	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
		<b>P308 + P313</b>	IF exposed or concerned: Get medical advice/ attention.
		<b>P330</b>	Rinse mouth.
		<b>P332 + P313</b>	If skin irritation occurs: Get medical advice/attention.
		<b>P337 + P313</b>	If eye irritation persists: Get medical advice/attention.
		<b>P362</b>	Take off contaminated clothing and wash before reuse.
Storage	<b>P391</b>	Collect spillage.	
	<b>P405</b>	Store locked up.	
Disposal	<b>P501</b>	Dispose of contents/container in accordance with local / regional / national / international regulations.	

**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

<b>HSNO Classifications</b>	Health Hazards	<b>6.1D</b>	Substances that are acutely toxic - Harmful
		<b>6.3A</b>	Substances that are irritating to the skin
		<b>6.4A</b>	Substances that are irritating to the eye
	Environmental Hazards	<b>9.1B</b>	Substances that are ecotoxic in the aquatic environment

**3. COMPOSITION/INFORMATION ON INGREDIENTS***Ingredients*

Chemical Entity	Formula	CAS Number	Proportion
Nonylphenol Ethoxylate 9.5 Eo	No Data Available	9016-45-9	100.0 %

**4. FIRST AID MEASURES***Description of necessary measures according to routes of exposure*

<b>Swallowed</b>	Seek prompt medical attention. Do NOT induce vomiting. Should it occur, keep the head lower than the trunk to avoid aspiration of the product into the lungs.
<b>Eye</b>	Wash immediately with plenty of running water for at least 15 minutes, keeping the lids open. Remove the contact lenses if possible. Seek prompt medical attention.
<b>Skin</b>	Remove contaminated clothes, washing the affected parts with plenty of running water, preferably under a shower. Seek prompt medical attention.
<b>Inhaled</b>	Seek prompt medical attention. Remove the victim to a ventilated place. In case of respiratory difficulty, supply oxygen. In case of respiratory arrest, provide artificial respiration.
<b>Advice to Doctor</b>	There is not known any specific antidote. Direct the treatment in accordance with the symptoms and clinical conditions of the patient.
<b>Medical Conditions Aggravated by Exposure</b>	No information available on medical conditions aggravated by exposure to this product.

**5. FIRE FIGHTING MEASURES**

<b>Flammability Conditions</b>	Product is a combustible liquid.
<b>Extinguishing Media</b>	In case of fire, appropriate extinguishing media include alcohol resistant foam, nebulized water, CO2 or dry chemical powder. Water jets should not be applied directly on the product in flames, for it may spread and increase the intensity of the fire. Cool the intact exposed containers, with water mist, and remove them.
<b>Hazardous Products of Combustion</b>	Combustible liquid. Incompatible with potent oxidants, potent acids and bases at high temperatures, compounds highly reactive with hydroxyl groups, and sources of ignition. In case of combustion, it may generate toxic fumes and carbon monoxide, besides carbon dioxide.
<b>Personal Protective Equipment</b>	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) or chemical splash suit. 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. Do NOT allow fire fighting water to reach waterways, drains or sewers. Store fire fighting water for treatment.
<b>Flash Point</b>	>265 °C Open Cup

<b>Lower Explosion Limit</b>	No Data Available
<b>Upper Explosion Limit</b>	No Data Available
<b>Auto Ignition Temperature</b>	No Data Available
<b>Hazchem Code</b>	No Data Available

## 6. ACCIDENTAL RELEASE MEASURES

<b>General Response Procedure</b>	Personnel involved in the clean up should wear full protective clothing as listed in section 8. Eliminate all sources of ignition. Evacuate all unnecessary personnel. Increase ventilation. Stop leak if safe to do so. Avoid walking through spilled product as it may be slippery. Do not allow product to reach drains, sewers or waterways. If product does enter a waterway, advise the Environmental Protection Authority or your local Waste Authority. Use clean, non-sparking tools and equipment.
<b>Clean Up Procedures</b>	Soak up spilled product using absorbent non-combustible material such as sand or soil. Avoid using sawdust or cellulose. When saturated, collect the material and transfer to a suitable, labelled chemical waste container and dispose of promptly as hazardous waste. Wash the site with water, which should be collected for disposal.

## 7. HANDLING AND STORAGE

<b>Handling</b>	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 vapours.
<b>Storage</b>	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 as listed in section 10. Keep away from sources of heat and open flames. In tanks it is recommended to maintain at inert gas atmosphere. This product is classified as a 'C1' Combustible Liquid for the purpose of storage and handling in accordance with the requirements of AS1940.
<b>Container</b>	Store in original packaging as approved by manufacturer. Recommended: stainless steel, carbon steel, coated steel with epoxy or PVC resin, polyester resin reinforced with fiber glass and polyethylene.

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

<b>General</b>	No exposure standard has been established for this product by the Australian Safety and Compensation Council (ASCC).
<b>Exposure Limits</b>	No Data Available
<b>Biological Limits</b>	No information available on biological limit values for this product.
<b>Engineering Measures</b>	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.
<b>Personal Protection Equipment</b>	RESPIRATOR: In case of emergency or contact with high concentrations of product wear a face mask of the self-contained type or with mandated air. It is recommended to wear half mask with filter for organic vapors exposure to vapors/aerosols (AS1715/1716). EYES: Safety goggles providing side protection or broad vision (AS1336/1337). HANDS: Gloves made of rubber or PVC (AS2161). CLOTHING: PVC apron. It is recommended to adopt safety boots/shoes (AS3765/2210).
<b>Work Hygienic Practices</b>	No Data Available

## 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Physical State</b>	Liquid
<b>Appearance</b>	Viscous Liquid
<b>Odour</b>	Practically Odourless
<b>Colour</b>	Colourless
<b>pH</b>	5.0 - 7.5
<b>Vapour Pressure</b>	< 0.001 kPa (20°C) torr (@ 20 °C)
<b>Relative Vapour Density</b>	No Data Available
<b>Boiling Point</b>	No Data Available
<b>Melting Point</b>	<5
<b>Freezing Point</b>	<5 °C
<b>Solubility</b>	Soluble in water 25°C
<b>Specific Gravity</b>	No Data Available
<b>Flash Point</b>	>265 °C Open Cup
<b>Auto Ignition Temp</b>	No Data Available
<b>Evaporation Rate</b>	No Data Available
<b>Bulk Density</b>	No Data Available
<b>Corrosion Rate</b>	No Data Available
<b>Decomposition Temperature</b>	No Data Available
<b>Density</b>	No Data Available
<b>Specific Heat</b>	No Data Available
<b>Molecular Weight</b>	No Data Available
<b>Net Propellant Weight</b>	No Data Available
<b>Octanol Water Coefficient</b>	No Data Available
<b>Particle Size</b>	No Data Available
<b>Partition Coefficient</b>	No Data Available
<b>Saturated Vapour Concentration</b>	No Data Available
<b>Vapour Temperature</b>	No Data Available
<b>Viscosity</b>	230-270 mPa.s (@ No Data Available)
<b>Volatile Percent</b>	No Data Available
<b>VOC Volume</b>	No Data Available
<b>Additional Characteristics</b>	No Data Available
<b>Potential for Dust Explosion</b>	Product is a liquid
<b>Fast or Intensely Burning Characteristics</b>	No Data Available
<b>Flame Propagation or Burning Rate of Solid Materials</b>	No Data Available
<b>Non-Flammables That Could Contribute Unusual Hazards to a Fire</b>	No Data Available
<b>Properties That May Initiate or Contribute to Fire Intensity</b>	No Data Available
<b>Reactions That Release Gases or Vapours</b>	No Data Available
<b>Release of Invisible Flammable Vapours and Gases</b>	No Data Available

## 10. STABILITY AND REACTIVITY

<b>Chemical Stability</b>	Product is stable under normal conditions of use, storage and temperature. Combustible liquid.
<b>Conditions to Avoid</b>	Avoid High temperatures, ignition sources and prolonged exposure to the air.

<b>Materials to Avoid</b>	Incompatible with potent oxidants, potent acids and bases at high temperatures, compounds highly reactive with hydroxyl groups, and sources of ignition.
<b>Hazardous Decomposition Products</b>	In case of combustion, it may generate toxic fumes and carbon monoxide, besides carbon dioxide.
<b>Hazardous Polymerisation</b>	Hazardous Polymerisation has not been reported.

## 11. TOXICOLOGICAL INFORMATION

<b>General Information</b>	Ingestion: Moderately toxic. LD50, rats: 2590 mg/kg. Contact with Skin: Moderately toxic. LD50, rabbits: 2830 mg/kg. Slight irritation to humans: 15mg, 3 days, intermittent Contact with the Eyes: Severe irritation: 5 mg, rabbits; 20 mg mice Chronic Toxicity: There is no known carcinogenic, mutagenic or teratogenic activity of the product.
<b>Eye/Irritant</b>	It can cause severe irritation and damages to the cornea.
<b>Ingestion</b>	For comparison with homologated products, it is expected that large quantities of this product can cause gastrointestinal discomfort, including irritation, nausea and diarrhea.
<b>Inhalation</b>	Due to its low vapor pressure, it is hardly probable that product causes inhalation problems at room temperature. It is possible that the aerosol of the product or of its solutions, in elevated concentrations in the air, can cause irritation to the respiratory tract.
<b>Skin Irritant</b>	Prolonged or repeated contacts can provoke moderate irritation or dermatitis.
<b>Carcinogen Category</b>	No Data Available

## 12. ECOLOGICAL INFORMATION

<b>Ecotoxicity</b>	One of its principal metabolites is nonylphenol, which is more resistant to degradation, with tendency to accumulate in fishes and shellfishes, and whose aquatic toxicity is estimated in 140 micrograms/L. Lepomis macrochirus Bluegill Sunfish LC50/96hr: 1300ug/L (1.3mg/L) Daphnia pulex Water Flea LC50/48hr: 4800ug/L (4.8mg/L)
<b>Persistence/Degradability</b>	The product can suffer from 90 to 100% degradation in biological treatment units. In running water it can suffer from 70 to 95% primary biodegradation in 28 days. The product is biodegradable. Rapidly degradable: NO AQUATIC FATE: Primary biodegradation tests with sediment and river water(1,2), indicate that primary degradation of polyethylene glycol linear nonylphenyl ether in water will be important (97% to 99% in 30 days). Biodegradation screening studies on the aerobic biodegradation of mixtures of branched and linear polyethylene glycol nonylphenyl ethers indicate rapid primary degradation to nonylphenol diethoxylate and nonylphenol ethoxylate under aerobic conditions and nonylphenol under anaerobic conditions(3-5). [(1) Yoshimura K et al; J Amer Oil Chem Soc 63: 1590-96 (1986) (2) Ruiz Cruz PJ, Dobarganes Garcis MC; Grasas y Aceites 29: 1-8 (1978) (3) Fischer WK, Gerike P; Water Res 9: 1137-41 (1975) (4) Ahel M et al; Comm Eur Communities, Eur 10388, Org Micropollut Aquat Environ pp. 412-28 (1986) (5) Kravetz L et al; Tenside Detergents 21: 1-6 (1984)]**PEER REVIEWED** (HSDB)
<b>Mobility</b>	No information available on mobility for this product. Completely soluble in water.
<b>Environmental Fate</b>	Avoid contaminating waterways, drains and sewers.
<b>Bioaccumulation Potential</b>	No information available on bioaccumulation for this product.
<b>Environmental Impact</b>	No Data Available

## 13. DISPOSAL CONSIDERATIONS

<b>General Information</b>	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.
<b>Special Precautions for Land Fill</b>	Contact a specialist disposal company or the local waste regulator for advice. Reprocessing whenever possible. Co-processing or incineration in authorized facilities, able to prevent emission of pollutants to the atmosphere. Incineration should be done in accordance with prevailing municipal, state and federal laws and standards from local environmental agencies.

## 14. TRANSPORT INFORMATION

### Land Transport (Australia)

ADG Code

<b>Proper Shipping Name</b>	Nonyl Phenol (9 - 9.5 Eo)
<b>Class</b>	C2 Combustible Liquids - Flash Point >93°C, Closed Cup, Not Excluded Flammable
<b>Subsidiary Risk(s)</b>	No Data Available
	No Data Available
<b>UN Number</b>	No Data Available
<b>Hazchem</b>	No Data Available
<b>Pack Group</b>	No Data Available
<b>Special Provision</b>	No Data Available

### Land Transport (New Zealand)

NZS5433

<b>Proper Shipping Name</b>	Nonyl Phenol (9 - 9.5 Eo)
<b>Class</b>	No Data Available
<b>Subsidiary Risk(s)</b>	No Data Available
	No Data Available
<b>UN Number</b>	No Data Available
<b>Hazchem</b>	No Data Available
<b>Pack Group</b>	No Data Available
<b>Special Provision</b>	No Data Available

### Land Transport (Papua New Guinea)

<b>Proper Shipping Name</b>	Nonyl Phenol (9 - 9.5 Eo)
<b>Class</b>	C2 Combustible Liquids - Flash Point >93°C, Closed Cup, Not Excluded Flammable
<b>Subsidiary Risk(s)</b>	No Data Available
	No Data Available
<b>UN Number</b>	No Data Available
<b>Hazchem</b>	No Data Available
<b>Pack Group</b>	No Data Available
<b>Special Provision</b>	No Data Available

### Land Transport (United States of America)

US DOT

<b>Proper Shipping Name</b>	Nonyl Phenol (9 - 9.5 Eo)
<b>Class</b>	No Data Available
<b>Subsidiary Risk(s)</b>	No Data Available
	No Data Available
<b>UN Number</b>	No Data Available
<b>Hazchem</b>	No Data Available
<b>Pack Group</b>	No Data Available
<b>Special Provision</b>	No Data Available

## Sea Transport

IMDG Code

<b>Proper Shipping Name</b>	Nonyl Phenol (9 - 9.5 Eo)
<b>Class</b>	No Data Available
<b>Subsidiary Risk(s)</b>	No Data Available
<b>UN Number</b>	No Data Available
<b>Hazchem</b>	No Data Available
<b>Pack Group</b>	No Data Available
<b>Special Provision</b>	No Data Available
<b>EMS</b>	No Data Available
<b>Marine Pollutant</b>	No

## Air Transport

IATA DGR

<b>Proper Shipping Name</b>	Nonyl Phenol (9 - 9.5 Eo)
<b>Class</b>	No Data Available
<b>Subsidiary Risk(s)</b>	No Data Available
<b>UN Number</b>	No Data Available
<b>Hazchem</b>	No Data Available
<b>Pack Group</b>	No Data Available
<b>Special Provision</b>	No Data Available

## National Transport Commission (Australia)

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

<b>Dangerous Goods Classification</b>	NOT Dangerous Goods according to the criteria of the Australian Code for the Transport of Dangerous Goods by Road & Rail (ADG Code)
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## 15. REGULATORY INFORMATION

**General Information** No Data Available

**Poisons Schedule (Aust)** No Data Available

## Environmental Protection Authority (New Zealand)

Hazardous Substances and New Organisms Amendment Act 2015

**Approval Code** HSR002503

## National/Regional Inventories

<b>Australia (AICS)</b>	Listed
<b>Canada (DSL)</b>	Not Determined
<b>Canada (NDSL)</b>	Not Determined
<b>China (IECSC)</b>	Not Determined
<b>Europe (EINECS)</b>	500-024-6



Europe (REACH)	Not Determined
Japan (ENCS/METI)	Not Determined
Korea (KECI)	Not Determined
Malaysia (EHS Register)	Not Determined
New Zealand (NZIoC)	Listed
Philippines (PICCS)	Not Determined
Switzerland (Giftliste 1)	Not Determined
Switzerland (Inventory of Notified Substances)	Not Determined
Taiwan (NCSR)	Not Determined
USA (TSCA)	Not Determined

## 16. OTHER INFORMATION

<b>Related Product Codes</b>	SUFNOB4000, SUFNOB4001, SUFNOB4050, SUFNOB8100
<b>Revision</b>	2
<b>Revision Date</b>	24 Jun 2014
<b>Key/Legend</b>	<p>&lt; Less Than &gt; Greater Than  <b>AICS</b> Australian Inventory of Chemical Substances  <b>atm</b> Atmosphere  <b>CAS</b> Chemical Abstracts Service (Registry Number)  <b>cm<sup>2</sup></b> Square Centimetres  <b>CO<sub>2</sub></b> Carbon Dioxide  <b>COD</b> Chemical Oxygen Demand  <b>deg C (°C)</b> Degrees Celcius  <b>EPA (New Zealand)</b> Environmental Protection Authority of New Zealand  <b>deg F (°F)</b> Degrees Farenheit  <b>g</b> Grams  <b>g/cm<sup>3</sup></b> Grams per Cubic Centimetre  <b>g/l</b> Grams per Litre  <b>HSNO</b> Hazardous Substance and New Organism  <b>IDLH</b> Immediately Dangerous to Life and Health  <b>immiscible</b> Liquids are insoluable in each other.  <b>inHg</b> Inch of Mercury  <b>inH<sub>2</sub>O</b> Inch of Water  <b>K</b> Kelvin  <b>kg</b> Kilogram  <b>kg/m<sup>3</sup></b> Kilograms per Cubic Metre  <b>lb</b> Pound  <b>LC50</b> 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.  <b>LD50</b> 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.  <b>ltr</b> or <b>L</b> Litre  <b>m<sup>3</sup></b> Cubic Metre  <b>mbar</b> Millibar  <b>mg</b> Milligram  <b>mg/24H</b> Milligrams per 24 Hours  <b>mg/kg</b> Milligrams per Kilogram  <b>mg/m<sup>3</sup></b> Milligrams per Cubic Metre  <b>Misc</b> or <b>Miscible</b> Liquids form one homogeneous liquid phase regardless of the amount of either component present.  <b>mm</b> Millimetre  <b>mmH<sub>2</sub>O</b> Millimetres of Water  <b>mPa.s</b> Millipascals per Second  <b>N/A</b> Not Applicable</p>

**NIOSH** National Institute for Occupational Safety and Health  
**NOHSC** National Occupational Health 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