



**SAFETY DATA SHEET**  
**SODIUM CARBOXYMETHYL CELLULOSE**  
**REVISION 5, DATE 01 JAN 21**

## 1. IDENTIFICATION

|                            |  |
|----------------------------|--|
| <b>Product Name</b>        | <b>Sodium Carboxymethyl Cellulose</b>  |
| <b>Other Names</b>         | Carboxymethylcellulose, sodium salt; SCMC; Sodium Carboxy Methyl Cellulose   |
| <b>Uses</b>                | Detergents; soaps; food products (dietetic foods and ice cream) where it acts as a water binder, thickener, suspending agent, and emulsion stabiliser; textile manufacturing (sizing); coating paper and paper board to lower porosity drilling muds; emulsion paints; protective colloid; pharmaceuticals; cosmetics. |
| <b>Chemical Family</b>     | No Data Available  |
| <b>Chemical Formula</b>    | C <sub>2</sub> H <sub>4</sub> O <sub>3</sub> .xNa.x  |
| <b>Chemical Name</b>       | Cellulose, carboxymethyl ether, sodium salt  |
| <b>Product Description</b> | No Data Available  |

### Contact Details of the Supplier of this Safety Data Sheet

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

### Emergency Contact Details

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

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

## 2. HAZARD IDENTIFICATION



## Poisons Schedule (Aust)

Not Scheduled

## Globally Harmonised System

## Hazard Classification

NOT hazardous according to the criteria of the Globally Harmonised System of Classification and Labelling of Chemicals (GHS)

## Signal Word

None

## National Transport Commission (Australia)

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

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

## Ingredients

| Chemical Entity         | Formula           | CAS Number | Proportion |
|-------------------------|-------------------|------------|------------|
| Carboxymethyl cellulose | No Data Available | 9004-32-4  | >=72 %     |
| Sodium chloride         | No Data Available | 7647-14-5  | <=15 %     |
| Sodium glycolate        | No Data Available | 2836-32-0  | <=14 %     |
| Moisture (water)        | No Data Available | 7732-18-5  | <=8 %      |

## 4. FIRST AID MEASURES

## Description of necessary measures according to routes of exposure

## Swallowed

IF SWALLOWED: Rinse mouth, then drink a glass of water. Get medical advice/attention if you feel unwell.

## Eye

IF IN EYES: Immediately flush eyes with running water for several minutes, holding eyelids open and occasionally lifting the upper and lower lids. Remove contact lenses if present and easy to do. Continue rinsing for at least 15 minutes. If eye irritation persists, get medical advice/attention.

## Skin

IF ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing and wash before reuse. If skin irritation occurs, get medical advice/attention.

## Inhaled

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. If respiratory symptoms persist, get medical advice/attention.

## Advice to Doctor

Treat symptomatically.

**Medical Conditions Aggravated by Exposure** No information available.

## 5. FIRE FIGHTING MEASURES

## General Measures

If safe to do so, move undamaged containers from fire area. Cool containers with water spray until well after fire is out.

## Flammability Conditions

May burn but does not ignite readily.

## Extinguishing Media

Use dry chemical, Carbon dioxide (CO<sub>2</sub>), foam or water spray for extinction.

|   |   |
|---|---|
| <b>Fire and Explosion Hazard</b>          | Avoid generating dust; fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard.<br>*Static charges generated by emptying package in or near flammable vapours may cause flash fire! |
| <b>Hazardous Products of Combustion</b>   | Fire may produce irritating, toxic and/or corrosive fumes, including Carbon oxides.   |
| <b>Special Fire Fighting Instructions</b> | Contain runoff from fire control or dilution water - Runoff may pollute waterways.  |
| <b>Personal Protective Equipment</b>      | Wear positive pressure self-contained breathing apparatus (SCBA) and chemical splash suit. SCBA and structural firefighter's uniform may provide limited protection.  |
| <b>Flash Point</b>                        | No Data Available   |
| <b>Lower Explosion Limit</b>              | No Data Available   |
| <b>Upper Explosion Limit</b>              | No Data Available   |
| <b>Auto Ignition Temperature</b>          | 250 - 370 °C  |
| <b>Hazchem Code</b>                       | No Data Available   |

## 6. ACCIDENTAL RELEASE MEASURES

|   |  |
|---|--|
| <b>General Response Procedure</b>           | Ensure adequate ventilation. ELIMINATE all ignition sources (if dust clouds can occur). Do not touch or walk through spilled material. Avoid generating dust. Avoid breathing dust and contact with eyes, skin and clothing. |
| <b>Clean Up Procedures</b>                  | Collect material (sweep or vacuum up) and keep in suitable, properly labelled containers for disposal (see SECTION 13).  |
| <b>Containment</b>                          | Stop leak if safe to do so – Prevent entry into waterways, drains or confined areas. Prevent dust cloud.   |
| <b>Decontamination</b>                      | No information available.  |
| <b>Environmental Precautionary Measures</b> | Prevent entry into drains and waterways.   |
| <b>Evacuation Criteria</b>                  | Spill or leak area should be isolated immediately. Keep unauthorised personnel away.   |
| <b>Personal Precautionary Measures</b>      | Use personal protective equipment as required (see SECTION 8).   |

## 7. HANDLING AND STORAGE

|                  |  |
|------------------|--|
| <b>Handling</b>  | Safety showers and eyewash facilities should be provided within the immediate work area for emergency use. Ensure adequate ventilation. Handle in accordance with good industrial hygiene and safety practice. Minimise dust generation and accumulation. Avoid breathing dust and contact with eyes, skin and clothing. Use personal protective equipment as required (see SECTION 8). Dry powders can build static electricity charges when subjected to the friction of transfer and mixing operations. Provide adequate precautions, such as electrical grounding and bonding, or inert atmospheres. |
| <b>Storage</b>   | Store in a cool, dry and well-ventilated place, out of direct sunlight. Keep container tightly closed. Keep away from heat and sources of ignition - No smoking. Keep away from incompatible materials (see SECTION 10).   |
| <b>Container</b> | Keep in the original container.  |

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

|                             |   |
|-----------------------------|---|
| <b>General</b>              | No specific exposure standards are available for this product. For dusts from solid substances without specific occupational exposure standards:<br>- Safe Work Australia Exposure Standard (Nuisance dusts): 8 hr TWA = 10 mg/m <sup>3</sup> (measured as inhalable dust).<br>- New Zealand WES (Particulates not otherwise classified): TWA = 10 mg/m <sup>3</sup> ; TWA = 3 mg/m <sup>3</sup> (respirable dust). |
| <b>Exposure Limits</b>      | No Data Available   |
| <b>Biological Limits</b>    | No information available.   |
| <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.

**Personal Protection Equipment**

- Respiratory protection: In case of inadequate ventilation, wear respiratory protection. Recommended: Dust mask/respirator (refer to AS/NZS 1715 & 1716).
- Eye/face protection: Wear appropriate eye protection to avoid eye contact. Recommended: Chemical safety goggles.
- Hand protection: Handle with gloves. Recommended: Impervious gloves.
- Skin/body protection: Wear appropriate personal protective clothing to avoid skin contact. Recommended: Overalls, safety shoes.

**Special Hazards Precautions**

No information available.

**Work Hygienic Practices**

Do not eat, drink or smoke when using this product. Always wash hands before smoking, eating, drinking or using the toilet. Wash contaminated clothing and other protective equipment before storage or re-use. Routine housekeeping should be instituted to ensure that dusts do not accumulate on surfaces.

**9. PHYSICAL AND CHEMICAL PROPERTIES**

|                                       |   |
|---------------------------------------|---|
| <b>Physical State</b>                 | Solid   |
| <b>Appearance</b>                     | Powder  |
| <b>Odour</b>                          | Odourless (free from objectionable odours)  |
| <b>Colour</b>                         | White to off-white  |
| <b>pH</b>                             | 8.0 - 12.0 (1% solution)  |
| <b>Vapour Pressure</b>                | No Data Available   |
| <b>Relative Vapour Density</b>        | No Data Available   |
| <b>Boiling Point</b>                  | No Data Available   |
| <b>Melting Point</b>                  | 300 °C  |
| <b>Freezing Point</b>                 | No Data Available   |
| <b>Solubility</b>                     | Soluble in water (both hot & cold)  |
| <b>Specific Gravity</b>               | No Data Available   |
| <b>Flash Point</b>                    | No Data Available   |
| <b>Auto Ignition Temp</b>             | 250 - 370 °C  |
| <b>Evaporation Rate</b>               | No Data Available   |
| <b>Bulk Density</b>                   | 0.4 - 0.8 g/cm <sup>3</sup>   |
| <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>                      | No Data Available   |
| <b>Volatile Percent</b>               | No Data Available   |
| <b>VOC Volume</b>                     | No Data Available   |
| <b>Additional Characteristics</b>     | Static charges generated by emptying package in or near flammable vapours may cause flash fire!   |
| <b>Potential for Dust Explosion</b>   | Avoid generating dust; fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard. |

|   |   |
|---|---|
| <b>Fast or Intensely Burning Characteristics</b>                      | No information available.   |
| <b>Flame Propagation or Burning Rate of Solid Materials</b>           | No information available.   |
| <b>Non-Flammables That Could Contribute Unusual Hazards to a Fire</b> | No information available.   |
| <b>Properties That May Initiate or Contribute to Fire Intensity</b>   | May burn but does not ignite readily.   |
| <b>Reactions That Release Gases or Vapours</b>                        | Fire/decomposition may produce irritating, toxic and/or corrosive fumes, including Carbon oxides. |
| <b>Release of Invisible Flammable Vapours and Gases</b>               | No information available.   |

## 10. STABILITY AND REACTIVITY

|   |   |
|---|---|
| <b>General Information</b>              | No information available.   |
| <b>Chemical Stability</b>               | This material is chemically stable.   |
| <b>Conditions to Avoid</b>              | Avoid generating dust. Keep away from heat and sources of ignition.                               |
| <b>Materials to Avoid</b>               | Incompatible/reactive with strong oxidising agents.   |
| <b>Hazardous Decomposition Products</b> | Fire/decomposition may produce irritating, toxic and/or corrosive fumes, including Carbon oxides. |
| <b>Hazardous Polymerisation</b>         | Hazardous polymerisation will not occur.  |

## 11. TOXICOLOGICAL INFORMATION

|                            |  |
|----------------------------|--|
| <b>General Information</b> | Information on possible routes of exposure: <ul style="list-style-type: none"><li>- Ingestion: No adverse effects expected; large amounts may be harmful.</li><li>- Eye contact: May cause eye irritation.</li><li>- Skin contact: May cause skin irritation.</li><li>- Inhalation: Material may be irritating to mucous membranes and upper respiratory tract.</li></ul> Chronic effects: No information available. |
| <b>Carcinogen Category</b> | None   |

## 12. ECOLOGICAL INFORMATION

|                                  |   |
|----------------------------------|---|
| <b>Ecotoxicity</b>               | Aquatic toxicity: <ul style="list-style-type: none"><li>- LC50, Fish (<i>Lepomis macrochirus</i>/<i>Onchorhynchus mykiss</i>): 100 – 1,000 mg/l (96 h).</li></ul> |
| <b>Persistence/Degradability</b> | The material is biodegradable.  |
| <b>Mobility</b>                  | No information available.   |
| <b>Environmental Fate</b>        | Prevent entry into drains and waterways.  |
| <b>Bioaccumulation Potential</b> | No information available.   |
| <b>Environmental Impact</b>      | No Data Available   |

**13. DISPOSAL CONSIDERATIONS****General Information**

Dispose of contents/container in accordance with local/regional/national regulations.

**Special Precautions for Land Fill**

Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

**14. TRANSPORT INFORMATION****Land Transport (Australia)**

ADG Code

|                             |  |
|-----------------------------|--|
| <b>Proper Shipping Name</b> | Sodium Carboxymethyl Cellulose                         |
| <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                                      |
| <b>Comments</b>             | NON-DANGEROUS GOODS: Not regulated for LAND transport. |

**Land Transport (Malaysia)**

ADR Code

|                             |  |
|-----------------------------|--|
| <b>Proper Shipping Name</b> | Sodium Carboxymethyl Cellulose                         |
| <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                                      |
| <b>Comments</b>             | NON-DANGEROUS GOODS: Not regulated for LAND transport. |

**Land Transport (New Zealand)**

NZS5433

|                             |  |
|-----------------------------|--|
| <b>Proper Shipping Name</b> | Sodium Carboxymethyl Cellulose                         |
| <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                                      |
| <b>Comments</b>             | NON-DANGEROUS GOODS: Not regulated for LAND transport. |

**Land Transport (United States of America)**

US DOT

|                             |  |
|-----------------------------|--|
| <b>Proper Shipping Name</b> | Sodium Carboxymethyl Cellulose                         |
| <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                                      |
| <b>Comments</b>             | NON-DANGEROUS GOODS: Not regulated for LAND transport. |

**Sea Transport**

IMDG Code

|                             |   |
|-----------------------------|---|
| <b>Proper Shipping Name</b> | Sodium Carboxymethyl Cellulose                        |
| <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  |
| <b>Comments</b>             | NON-DANGEROUS GOODS: Not regulated for SEA transport. |

**Air Transport**

IATA DGR

|                             |   |
|-----------------------------|---|
| <b>Proper Shipping Name</b> | Sodium Carboxymethyl Cellulose                        |
| <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>Comments</b>             | NON-DANGEROUS GOODS: Not regulated for AIR transport. |

**National Transport Commission (Australia)**

Australian Code for the Transport of Dangerous Goods by Road &amp; 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) |
|---------------------------------------|---|

**15. REGULATORY INFORMATION**

|                            |                   |
|----------------------------|-------------------|
| <b>General Information</b> | No Data Available |
|----------------------------|-------------------|

## SAFETY DATA SHEET SODIUM CARBOXYMETHYL CELLULOSE REVISION 5, DATE 01 JAN 21

Poisons Schedule (Aust)

Not Scheduled

## Environmental Protection Authority (New Zealand)

Hazardous Substances and New Organisms Amendment Act 2015

Approval Code

Not Hazardous

## National/Regional Inventories

Australia (AIIC)

Listed

Canada (DSL)

Listed

Canada (NDSL)

Not Listed

China (IECSC)

Listed

Europe (EINECS)

618-378-6

Europe (REACH)

Not Determined

Japan (ENCS/METI)

8-181/8-203

Korea (KECI)

KE-05354

Malaysia (EHS Register)

Not Listed

New Zealand (NZIoC)

Listed

Philippines (PICCS)

Listed

Switzerland (Giftliste 1)

Not Determined

Switzerland (Inventory of Notified Substances)

Not Determined

Taiwan (NCSR)

Listed

USA (TSCA)

Listed

## 16. OTHER INFORMATION

## Related Product Codes

CAMECE0100, CAMECE0700, CAMECE1000, CAMECE1001, CAMECE1002, CAMECE1003, CAMECE1004, CAMECE1005, CAMECE1006, CAMECE1007, CAMECE1008, CAMECE1009, CAMECE1010, CAMECE1011, CAMECE1100, CAMECE1200, CAMECE1300, CAMECE1305, CAMECE1500, CAMECE1800, CAMECE1801, CAMECE1802, CAMECE2000, CAMECE2100, CAMECE2101, CAMECE2300, CAMECE2500, CAMECE2600, CAMECE2700, CAMECE2800, CAMECE2900, CAMECE3000, CAMECE3001, CAMECE3010, CAMECE3100, CAMECE3200, CAMECE4000, CAMECE4100, CAMECE4500, CAMECE5000, CAMECE5600, CAMECE5700, CAMECE5900, CAMECE5920, CAMECE6000, CAMECE6500, CAMECE6600, CAMECE6700, CAMECE6701, CAMECE6702, CAMECE6704, CAMECE6705, CAMECE6706, CAMECE6707, CAMECE6708, CAMECE6709, CAMECE6710, CAMECE6711, CAMECE6712, CAMECE6713, CAMECE6714, CAMECE6715, CAMECE7000, CAMECE7200, CAMECE7700, CAMECE8000, CAMECE8200, CAMECE8300, CAMECE8400, CAMECE8500, CAMECE8600, CAMECE8800, CAMECE8900, CAMECE9000, CAMECE9100, CAMECE9200, CAMECE9300, CAMECE9400, CAMECE9500, CAMECE9600

Revision

5

Revision Date

01 Jan 2021

Reason for Issue

Upddate

&lt; Less Than



## Key/Legend

> Greater Than  
**AICS** Australian Inventory of Chemical Substances  
**atm** Atmosphere  
**CAS** Chemical Abstracts Service (Registry Number)  
**cm<sup>2</sup>** Square Centimetres  
**CO<sub>2</sub>** 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/cm<sup>3</sup>** 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  
**inH<sub>2</sub>O** Inch of Water  
**K** Kelvin  
**kg** Kilogram  
**kg/m<sup>3</sup>** Kilograms per Cubic Metre  
**lb** Pound  
**LC<sub>50</sub>** LC stands for lethal concentration. LC<sub>50</sub> 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.  
**LD<sub>50</sub>** LD stands for Lethal Dose. LD<sub>50</sub> 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  
**m<sup>3</sup>** Cubic Metre  
**mbar** Millibar  
**mg** Milligram  
**mg/24H** Milligrams per 24 Hours  
**mg/kg** Milligrams per Kilogram  
**mg/m<sup>3</sup>** Milligrams per Cubic Metre  
**Misc or Miscible** Liquids form one homogeneous liquid phase regardless of the amount of either component present.  
**mm** Millimetre  
**mmH<sub>2</sub>O** 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