Supplemental information to help with explanation of the Petro Canada SDS:

Section 1 – Contains Product name and supplier information – make sure that the product and supplier on the SDS matches the name on the label

Section 2 – Lists not only hazards, but information that is required on supplier and workplace labels – also provides more detailed information about the hazards presented on the label – Ex. If a product is heated, the vapour could cause scalding of the skin

Section 3 – Confirms the chemical Identity of each hazardous ingredient and indicates if there are any trade secrets. A Trade secret is something that can be obtained when a supplier/manufacturer feels as though disclosing the chemical properties of their product would damage their business. If so, that supplier has to apply for a trade secret exemption, which is given to and approved by an OH & S Officer – a date, time, and signature of the Officer will be in this section – if you know ingredients are missing in a chemical and there is no application approval, contact LRWS or an OH & S officer.

Section 4 – Provides first aid measures and treatment information in the event of exposure – to be taken immediately to treat someone. SDS will give specific instructions of how to treat; as well as safe precautions and appropriate PPE for the first responder to use – make sure the first aid advice is consistent with the health hazards described on the SDS.

Section 5 – Firefighting Measures – fire extinguishing materials that are and are not compatible with fighting that specific fire, hazardous bi-products of that product during combustion, and brief information for firefighters to use explaining the type of product involved in the fire – read this info before – so you know how to handle an emergency.

Section 6 – Provides precautions to take during accidental release or spills – Information is used for the development of Spill Response Plan(s) in many worksites – It tells you what you must do immediately in case of a spill/leak, the training and PPE required for safe clean-up, and all the required materials that must be readily accessible to do the safe/effective cleanup.

Section 7 – Handling & Storage – discusses safe handling procedures specific conditions of where and where not to store/handle the product– such procedures must reflect the product you use at the workplace as well as the training you've received on using that product.

Section 8 – Exposure Controls/Personal Protection - section discusses exposure guidelines and provides numerical values such as the Threshold Limit Value which is the amount of the product that is thought to be acceptable in the workplace air (safe to work in) for a specified time
TWA – The concentration of the product that is safe to work in for 8 hours a days
STEL – Can only work in that area (concentration of the product) for 15 minutes at no more than 4x per day
CEIL – concentration amount that shouldn't be exceeded at anytime
--May see types of controls in this section (IE: ventilation, barriers/enclosures)

Section 9 – Chemical Properties – Helps determine the safe handling, use, and storage procedures.

Appearance – Gas, liquid, Solid? Confirm the description on the SDS is the same as the actual product

Odour Threshold – Is the odour readily detectable below the exposure limit

Melting/Freezing Point – Does the physical state of the product change at working temperature

Boiling Point – Near the Boiling Point, concentrations of vapour may be very high – more precautions needed

Flash Point – How easily/readily the product catches fire
Lower Exposure Limit – Lowest concentration in the air that burns
Upper Exposure Limit – Highest concentration in the air that burns
Auto Ignition Temperature – Temperature at which the product starts burning without ignition source
Always seek medical attention if you have been exposed or hurt by chemicals
Physical Properties – influence how much of the product can be in the air
Evaporation Rate – How quickly the product evaporates
Vapour Density – Density of the vapour relative to that of the air – lighter vapours rise (more in air), heavy ones sink
Vapour Pressure – Indication of how much of the product could be in the air – light pressure = more in air
- important to know for products that are hazardous/fatal if inhaled, spilled, or easily set a flame

Section 10 – Chemical Stability & Reactivity
- certain chemicals can start on fire or explode is not handled or stored properly – this section will give info on that
- Bi-products of certain products can be created as a result of handling, use, and storage – these bi-products can be known as decomposition products that can be toxic, flammable, or explosive
Ex. Isopropyl Ether – A solvent that can develop explosive prosperities during basic storage and if stored in high temp.
- Reactivity – Products may result in fire and explosion hazards due t the nature of the product – always store according to instructions
- Some chemicals are affected by environmental conditions such as light, moisture, and oxygen concentration in the air
- make sure to read the SDS for information on hazards created by conditions like those and others such as aging of the product, air, pressure, shock, temp. etc.

Section 11 – Toxicological Information – provides information on acute (min, hours, day) and chronic (months, years) toxicity, symptoms of exposure, and health effects (drowsiness or dizziness – some symptoms may appear days later
– use LD50 or LC50
- LD – Lethal dose , LC – Lethal Concentration , 50 – 50% of the animal group died
- also may describe carcinogenicity, mutagenicity, and reproductive affects of the product
- Be familiar with symptoms exposure and report immediately to your supervisor so you can seek medical attention and so that this type of accident can be prevented from happening again
- Chronic health effects typically develop from exposure that lasts for months or years and may develop from only one incident of exposure – Illnesses develop slowly and may appear only after the exposure has stopped – asbestos example
Routes of Entry – Knowing these will give you an indication of what PPE to utilize
Inhalation – Breathing it in
Eye contact – Splashing in eyes or rubbing eyes with contaminated hands
Skin Contact – Touching the product or being covered in a mist
Ingestion – Accidently swallowing
Injection – Breaking the skin – Needle OR sharp

Section 12 – Ecological information – Used primarily by environmental specialists; showcases how the product affects organisms in the environment and how the product behaves in an environment when it accumulates or is broken-down

Section 13 – Disposal Considerations – Provides disposal advice that includes treatment of how to make the waste less toxic/hazardous, waste handling procedures, and waste storage conditions – not mandatory in Canada – if taken into consideration, you must be aware of what provincial, municipal, and federal laws apply to your workplace

Section 14 - Transport Information – Hazards that arise during transport – provides UN number, proper shipping name, Transport Class or classes, and special precautions for shipping

Section 15 – Regulatory Information – May list other Laws that apply (Environmental Law, OH & S Regulations that haven't been stated anywhere else in the SDS, transport/shipping laws, etc.)

Section 16 – Other Information – Date that the SDS was written, SDS revision(s), Key or legend to any abbreviations used, and other information such as NFPA or HMIS (USA identification systems)
Good Practice- to use the least hazardous product that is effective and affordable for the task. (IE- vinegar instead of Windex)