RECO-COOL

TECHNICAL BULLETIN 0010/12

COOLANT DISPOSAL

There is a lot of confusion regarding coolants in the market place, both in the heavy duty diesel segment (eg mining, earthmoving and road transport), and the automotive sector. The questions and answers below deal with the commonly discussed aspects of radiator coolant toxicity and disposal. The information is provided in good faith, however we advise the end user of coolants to confirm the answers listed below with the relevant government utility, mine site or waste disposal company.

Q1. Is there any such thing as an environmentally friendly coolant?
A1. This is a very broad and potentially misleading term. Certainly some coolants are less toxic than others, but even the water based (non glycol) coolants may contain additives that are schedule five and six poisons to help stop corrosion on metal surfaces. Recochem is able to provide MSDSs for each of our coolant products which indicate the toxicology status of the virgin coolant fluid.

Q2. If a cooling system contained just water, could this be drained into a stormwater or sewerage system without any pre-treatment?
A2. Generally, not. The water is likely to contain wear metals from the engine, such as iron, copper, lead, and most state water authorities will not sanction these metals being disposed into the their waste streams.

Q3. Is ethylene glycol biodegradable?
A3. Yes, it is classed as 'readily biodegradable'. The time taken to biodegrade will depend on many factors, temperature, dilution with water, aerobic and anaerobic catalysts that are present etc. The decomposition products of ethylene glycol are water & carbon dioxide.

Q4. Can we then dispose of ethylene glycol coolants into a waste water stream such as storm water or sewerage?
A4. Generally not. In addition to the reasons outlined in question two, ethylene glycol has a high Biological Oxygen Demand (BOD). This means that the glycol will absorb oxygen out of the water stream, which may be essential for marine life. To put this into

perspective, note sugar or alcohol also have a high BOD and will similarly rob any water stream of oxygen.

Q5. Propylene Glycol based inhibitors are becoming more popular, can these be disposed of in sewerage or stormwater?
A5. ***Generally not. In addition to the reasons outlined in question two. Propylene glycol also has a high BOD, hence for the same reasons in question four, should not be disposed directly into sewerage or stormwater.***

Q6. Is there any situation where coolant, including ethylene glycol based products, can be disposed of other than an accredited recycler or disposal agent?
A6. Yes. Certain mine sites, especially alumina refineries, gold and base metal mines, have tailings dams, which are generally 10-20 million litres in capacity. In agreement with the mine management (originating from the environmental department), the coolant may be able to be disposed of in the non potable water bodies. Approaches made to local councils / waste water authorities for disposal into effluent.

Q7. Where else can waste coolant be disposed?
A7. There are generally several accredited waste treatment and recycling companies in all states. Generally the coolant will be disposed of rather than being recycled and the treatment company should issue certificate of destruction. Coolants may also be incinerated at accredited plants.