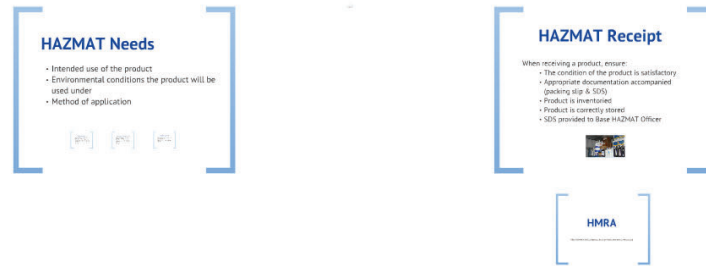




HAZMAT Needs, Selection, Procurement and Receipt

- Policy, procedural and legal requirements
- HAZMAT Needs
- HAZMAT Selection: Initial Selection and already in use
- HAZMAT Procurement



HAZMAT Needs

- Intended use of the product
- Environmental conditions the product will be used under
- Method of application



Choosing an adhesive

- Intended use – bonding wood to wood, metal to metal, metal to plastic, etc.
- Environmental conditions – will the product withstand extreme temperatures and exposure to salt water? will substrates require joining be subjected to stress?
- Method of application – spray, brush, special equipment.

Choosing a Cleaning Product

- Intended use – disinfecting, degreasing, polishing, stain removing
- Environmental conditions – indoors or outdoors, toxic or non-toxic, machine shop or office use.
- Method of application – spray, brush, special equipment.

Choosing a Oil product

- Intended use – vehicle, lawnmower, boat, high mileage, performance
- Environmental conditions – indoors or outdoors, toxic or non-toxic, machine shop or office use.

HAZMAT Selection

- Consider choices
- Obtain technical data
- Assess risk
- Conduct tests and trials
- Select material
- Develop specifications

HAZMAT Lifecycle Costs

- Transport
- Specialized storage facilities or lockers
- Cost to educate the workers
- Mechanical control measures and/or PPE
- Maintenance costs
- Inventories
- Data collection
- Clean-up costs
- Disposal costs

Alternatives

- DAOD 4003-1: minimize HAZMAT use wherever practicable
- Less hazardous products should be chosen.
- Be aware of substitutions and alternatives – check manufacturer's requirements, Mil Specs and Base HAZMAT Control Authority

Assess Risk

- Schedule 1 of CEPA
- Hazardous Materials Preferred Product Selector (HMPPS)
- Hazardous Materials Reference Application (HMRA)
- Base HAZMAT Coordinator

Schedule 1 - CEPA

The screenshot shows the CEPA Environmental Registry website. The main heading is "Substances Lists". Below it, there is a search bar and a list of toxic substances. The list includes:

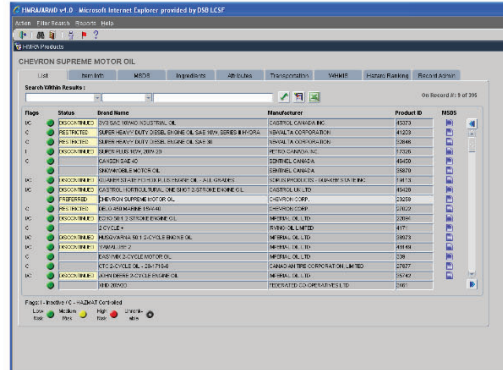
1. Chlorobiphenyls that have the molecular formula $C_{12}H_{10-12}Cl_n$ in which "n" is greater than 2
2. Dodecachloropentacyclo [5,3,0,0^{2,4},0^{3,8},0^{4,6}] decane (Mirex)
3. Polychlorinated Biphenyls that have the molecular formula $C_{12}H_{10-12}Br_n$ in which "n" is greater than 2
4. Chlorofluorocarbon, totally halogenated chlorofluorocarbons that have the molecular formula $C_xCl_yF_z$ (2,2,4,4-tetra) (CFC-11)
5. Polychlorinated Terphenyls that have a molecular formula $C_{18}H_{14-16}Cl_n$ in which "n" is greater than 2
6. Asbestos
7. Lead
8. Mercury
9. Vinyl Chloride
10. Bromochlorodifluoromethane that has the molecular formula CF_2BrCl
11. Bromotrifluoromethane that has the molecular formula CF_3Br
12. Dibromotetrafluoroethane that has the molecular formula $C_2F_4Br_2$
13. Fuel containing toxic substances that are dangerous goods within the meaning of section 2 of the Transportation of Dangerous Goods Act, 1992 and that
 1. are neither normal components of the fuel nor additives designed to improve the characteristics or the performance of the fuel, or
 2. are normal components of the fuel or additives designed to improve the characteristics or performance of the fuels, but are present in quantities or concentrations greater than those generally accepted by industry standards

The screenshot shows the Substance Detail page for Mercury. The page includes a description of mercury's toxicity and its management. Key information includes:

- Substance Detail:** Mercury
- Description:** Approximately half of the mercury currently cycling through our environment originates from human activities (such as the combustion of coal and the incineration of waste), while the other half can be attributed to natural sources and processes. Despite mercury's toxic nature, humans take advantage of its unique properties to produce various consumer products, including fluorescent lights and dental amalgam. When mercury from natural and anthropogenic sources is released to the atmosphere, it can be transported around the globe on wind currents, being deposited onto land and reemitted into the atmosphere several times along the way. Mercury can exist in several forms depending on the surrounding conditions. The most toxic form, known as methylmercury, can bioaccumulate in fish and may pose a potential health threat to fish-eating animals and humans.
- CAS (Chemical Abstract Service) registry number:** 7439-97-6
- Risk Assessment:**
 - Human Health: Risk Assessment of Mercury in Fish and Health Benefits of Fish Consumption
 - CEPA 1999 Schedule 1 - List of Toxic Substances - This substance has been added to the List of Toxic Substances.
 - Full life cycle management of the substance (Track 2) under the Toxic Substances Management Policy
- Source(s):** This substance is entering the environment from the following source(s):
 - Base Metals Smelting Sector
 - Chemical Industry
 - Electric Power Generation Sector (Fossil Fuel)
 - Environmental Emergency
 - Incineration
 - Industrial, Commercial and Consumer Products

Hazardous Materials Reference Application (HMRA)

- Green is low risk
- Yellow is medium risk
- Red is high risk
- Toxicological properties can be identified.



The screenshot shows a web browser window displaying the HMRA application interface. The search criteria are 'CHEVRON SUPREME MOTOR OIL'. The search results table is as follows:

Flags	Status	Brand Name	Manufacturer	Product ID	RISKS
W	EXPOSED	30000 MOTOR OIL SYNTHETIC 30	CASTROL GROUP INC.	30003	Low
C	RESTRICTED	30000 MOTOR OIL SYNTHETIC 30 4000	CASTROL GROUP INC.	40003	Low
C	RESTRICTED	30000 MOTOR OIL SYNTHETIC 30 4000	CASTROL GROUP INC.	40003	Low
C	RESTRICTED	30000 MOTOR OIL SYNTHETIC 30 4000	CASTROL GROUP INC.	40003	Low
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C	RESTRICTED	30000 MOTOR OIL SYNTHETIC 30 4000	CASTROL GROUP INC.	40003	Low
C	RESTRICTED	30000 MOTOR OIL SYNTHETIC 30 4000	CASTROL GROUP INC.	40003	Low
C	RESTRICTED	30000 MOTOR OIL SYNTHETIC 30 4000	CASTROL GROUP INC.	40003	Low
C	RESTRICTED	30000 MOTOR OIL SYNTHETIC 30 4000	CASTROL GROUP INC.	40003	Low

Selection of Product Already In Use

Your Unit must determine:

- if the initial selection process was previously completed
- if there are any hazards associated with the products based on its past
- If new regulatory restrictions are in force
- if alternatives have become available

HAZMAT Procurement

- Select the source of supply and means of procurement
- Identify and approve products
- Make appropriate material data entries (e.g. inventory)

HAZMAT Receipt

When receiving a product, ensure:

- The condition of the product is satisfactory
- Appropriate documentation accompanied (packing slip & SDS)
- Product is inventoried
- Product is correctly stored
- SDS provided to Base HAZMAT Officer





HMRA

http://admmat.mil.ca/dgmssc/dsco/en/tools_resources_hmra_e.asp