Toxic Compound Data Sheet

Name: Iron pentacarbonyl

CAS Number: 13463-40-6

Justification: This compound is listed in Ohio Administrative Code 3745 - 114 - 01 because it fulfills one or more of the following criteria: substances that are known to be, or may reasonably be anticipated to be, carcinogenic, mutagenic, teratogenic, or neurotoxic, causes reproductive dysfunction, is acutely or chronically toxic, or causes the threat of adverse environmental effects through ambient concentrations, bioaccumulation, or atmospheric deposition. Iron pentacarbonyl exposre can cause pulmonary edema, central nervous system effects, dizziness, nausea, vomiting; chest pain, cough, and difficult breathing, possibly even cyanosis and circulatory collapse.

Removal Justification: Irritant only, used in consumer products (gasoline additive). . Took out because is not made in US. The National Institute for Occupational Safety and Health has set a recommended exposure limit at 0.1 ppm (0.23 mg/m^3) over an eight-hour time-weighted average, and a short-term exposure limit at 0.2 ppm (0.45 mg/m^3). There are only three plants manufacturing iron pentacarbonyl; BASF in Germany and GAF in Alabama have capacities of 9000 and 1500-2000 tonnes/year respectively.

Molecular Weight (g/mol): 195.90

Synonyms: Iron carbonyl, Pentacarbonyl iron

U.S. EPA Carcinogenic Classification (IRIS): Not listed on IRIS.

PBT: Not listed as Persistent Bioaccumulative or Toxic.

NTP: Not listed by the National Toxicology Program (NTP).

HAP: Not listed by U.S. EPA as a Hazardous Air Pollutant (HAP).

112r: Threshold quantity (TQ) listed as 2,500 lbs.

ACGIH: TLV: 0.1 ppm or 801 $\mu g/m^3$. TLV STEL: 0.2 ppm or 1602 $\mu g/m^3$. Critical effects: pulmonary edema, central nervous system effects.

HSDB: Listed in the Hazardous Substances Data Bank. Inhalation may cause dizziness, nausea, vomiting; delayed reaction may occur with chest pain, cough, and difficult breathing, possibly even cyanosis and circulatory collapse.

International IARC: Not listed by International Agency for Research on Cancer (IARC).

ATSDR (MRL): Not listed by the Agency for Toxic Substances and Disease Registry (ATSDR).

Reference Material

1. U.S. EPA 2001. *List of Lists: Consolidated List of Chemicals Subject to the Emergency Planning and Community Right-to-Know Act (EPCRA) and Section 112(r) of the Clean Air Act*. EPA-550-B-01-003. October 2001. http://www.epa.state.oh.us/dapc/atu/112%28r%29/list.pdf

2. American Conference of Governmental Industrial Hygienists (ACGIH) 2006. *TLVs and BEIs: Based on the Documentation of the Threshold Limit Values for Chemical Substances and Physical Agents and Biological Exposure Indices*. Cincinnati, OH: ACGIH Worldwide.

3. Hazardous Substances Data Bank (HSDB), a database of the National Library of Medicine's TOXNET system (http://toxnet.nlm.nih.gov)

Completed by: 1, 7, 1, 2 Date: 8/16/06, 8/21/06, 5/20/14, 6/10/14

Toxic Compound Data Sheet

Name: Isobutyl nitrite

CAS Number: 542-56-3

Justification: This compound is listed in Ohio Administrative Code 3745 - 114 - 01 because it fulfills one or more of the following criteria: substances that are known to be, or may reasonably be anticipated to be, carcinogenic, mutagenic, teratogenic, or neurotoxic, causes reproductive dysfunction, is acutely or chronically toxic, or causes the threat of adverse environmental effects through ambient concentrations, bioaccumulation, or atmospheric deposition. Isobutyl nitrite is mildly toxic and can cause anoxia and blood effects.

Removal Justification: Minimal risk TLV: Used in consumer products (room deodorizers).

Molecular Weight (g/mol): 103.12

Synonyms: IBN; Nitrous acid, isobutyl ester; Nitrous acid, 2-methylpropyl ester

U.S. EPA Carcinogenic Classification (IRIS): Not listed on IRIS.

PBT: Not listed as Persistent Bioaccumulative or Toxic.

NTP: Not listed by the National Toxicology Program (NTP).

HAP: Not listed by U.S. EPA as a Hazardous Air Pollutant (HAP).

112r: Not listed under Section 112(r) of the Clean Air Act.

ACGIH: TLV STEL (ceiling value): 1 ppm or 4,218 µg/m^3. Confirmed animal carcinogen with unknown relevance to humans (A3). Critical effects: anoxia, blood.

HSDB: Listed in the Hazardous Substances Data Bank.

International IARC: Not listed by International Agency for Research on Cancer (IARC).

ATSDR (MRL): No minimum risk level (MRL) available from the Agency for Toxic Substances and Disease Registry (ATSDR).

Reference Material

1. American Conference of Governmental Industrial Hygienists (ACGIH) 2006. *TLVs and BEIs: Based on the Documentation of the Threshold Limit Values for Chemical Substances and Physical Agents and Biological Exposure Indices*. Cincinnati, OH: ACGIH Worldwide.

2. Hazardous Substances Data Bank (HSDB), a database of the National Library of Medicine's TOXNET system (http://toxnet.nlm.nih.gov)

Completed by: 1, 7, 1, 2 Date: 8/16/06, 8/21/06, 4/9/14, 6/10/14

Toxic Compound Data Sheet

Name: Methyl Acrylonitrile

Cas Number: 00126-98-7

Justification: This compound is listed in Ohio Administrative Code 3745 - 114 - 01 because it fulfills one or more of the following criteria: substances that are known to be, or may reasonably be anticipated to be, carcinogenic, mutagenic, teratogenic, or neurotoxic, causes reproductive dysfunction, is acutely or chronically toxic, or causes the threat of adverse environmental effects through ambient concentrations, bioaccumulation, or atmospheric deposition. Methyl Acrylonitrile can cause eye and skin irritation and CNS impairment.

Removal Justification: Minimum risk TLV

Molecular Weight: 67.09 g/mol

Synonyms: None

U.S. EPA Carcinogenic Classification (IRIS): Not Listed in IRIS

PBT: Not Listed as Persistent, Bioaccumulative and Toxic

NTP: Not Listed by the National Toxicology Program

HAP: Not Listed as a Hazardous Air Pollutant by U.S. EPA

112r: Not Listed in Section 112r of the Clean Air Act

ACGIH: TLV-TWA 1 ppm or 2,744 ug/m^3; critical effects: Central nervous system impairment, eye and skin irritation

HSDB: Listed in the Hazardous Substances Data Bank.

eye and skin irritation

International IARC: Not Listed as an Agent Reviewed by IARC

ATSDR, MRL: Not Available

Reference Material

1. American Conference of Governmental Industrial Hygienists (ACGIH) 2006. *TLVs and BEIs: Based on the Documentation of the Threshold Limit Values for Chemical Substances and Physical Agents and Biological Exposure Indices*. Cincinnati, OH: ACGIH Worldwide.

2. Hazardous Substances Data Bank (HSDB), a database of the National Library of Medicine's TOXNET system http://toxnet.nlm.nih.gov

Completed by: 7, 2, 1, 2

Date: 8/21/06, 8/21/06, 4/11/14, 6/10/14

Toxic Compound Data Sheet

Name: Methyl Ethyl Ketone Peroxide

Cas Number: 01338-23-4

Justification: This compound is listed in Ohio Administrative Code 3745 - 114 - 01 because it fulfills one or more of the following criteria: substances that are known to be, or may reasonably be anticipated to be, carcinogenic, mutagenic, teratogenic, or neurotoxic, causes reproductive dysfunction, is acutely or chronically toxic, or causes the threat of adverse environmental effects through ambient concentrations, bioaccumulation, or atmospheric deposition. Methyl Ethyl Ketone Peroxide can cause liver and kidney damage; eye and skin irritation.

Removal Justification: Minimal risk TLV

Molecular Weight: 176.24 g/mol

Synonyms: 2-Butanone peroxide; MEKP

U.S. EPA Carcinogenic Classification (IRIS): Not Listed in IRIS

PBT: Not Listed as Persistent, Bioaccumulative and Toxic

NTP: Not Listed by the National Toxicology Program

HAP: Not Listed as a Hazardous Air Pollutant by U.S. EPA

112r: Not Listed in Section 112r of the Clean Air Act

ACGIH: TLV-TWA Ceiling 0.2ppm or 1,442 ug/m^3; critical effects: liver and kidney damage, eye and skin irritation

HSDB: Listed in the Hazardous Substances Data Bank

liver and kidney damage, eye and skin irritation

International IARC: Not Listed as an Agent Reviewed by IARC

ATSDR, MRL: Not Available

Reference Material

1. Hazardous Substances Data Bank (HSDB), a database of the National Library of Medicine's TOXNET system (http://toxnet.nlm.nih.gov)

2. American Conference of Governmental Industrial Hygienists (ACGIH) 2006. *TLVs and BEIs: Based on the Documentation of the Threshold Limit Values for Chemical Substances and Physical Agents and Biological Exposure Indices*. Cincinnati, OH: ACGIH Worldwide.

Completed by: 7, 2, 1, 2

Date: 8/21/06, 8/21/06, 4/11/14, 6/10/14

Toxic Compound Data Sheet

Name: o-Methylcyclohexanone

Cas Number: 00583-60-8

Justification: This compound is listed in Ohio Administrative Code 3745 - 114 - 01 because it fulfills one or more of the following criteria: substances that are known to be, or may reasonably be anticipated to be, carcinogenic, mutagenic, teratogenic, or neurotoxic, causes reproductive dysfunction, is acutely or chronically toxic, or causes the threat of adverse environmental effects through ambient concentrations, bioaccumulation, or atmospheric deposition. o-Methylcyclohexanone can cause liver and kidney damage; CNS impairment and respiratory irritation.

Removal Justification: minimal risk TLV, irritant only.

Molecular Weight: 112.17 g/mol

Synonyms: None

U.S. EPA Carcinogenic Classification (IRIS): Not Listed in IRIS

PBT: Not Listed as Persistent, Bioaccumulative and Toxic

NTP: Not Listed by the National Toxicology Program

HAP: Not Listed as a Hazardous Air Pollutant by U.S. EPA

112r: Threshold 1,000 lbs Listed in Section 112r of the Clean Air Act

ACGIH: TLV-TWA 50 ppm or 229,387 ug/m^3; critical effects: liver and kidney damage; CNS impairment and respiratory irritation

HSDB: Listed in the Hazardous Substances Data Bank.

CNS impairment; respiratory irritation

International IARC: Not Listed as an Agent Reviewed by IARC

ATSDR, MRL: Not Available

Reference Material

1. American Conference of Governmental Industrial Hygienists (ACGIH) 2006. *TLVs and BEIs: Based on the Documentation of the Threshold Limit Values for Chemical Substances and Physical Agents and Biological Exposure Indices*. Cincinnati, OH: ACGIH Worldwide.

2. Hazardous Substances Data Bank (HSDB), a database of the National Library of Medicine's TOXNET system.

   http://toxnet.nlm.nih.gov

Completed by: 7, 1, 2 Date: 8/23/06, 3/31/14, 6/10/14

Toxic Compound Data Sheet

Name: Methylene bis(4-Cyclohexylisocyanate)

Cas Number: 05124-30-1

Justification: This compound is listed in Ohio Administrative Code 3745 - 114 - 01 because it fulfills one or more of the following criteria: substances that are known to be, or may reasonably be anticipated to be, carcinogenic, mutagenic, teratogenic, or neurotoxic, causes reproductive dysfunction, is acutely or chronically toxic, or causes the threat of adverse environmental effects through ambient concentrations, bioaccumulation, or atmospheric deposition. Methylene bis(4-Cyclohexylisocyanate) can cause respiratory and skin irritation.

Removal Justification: irritant only (skin & respiratory irritation)

Molecular Weight: 262.35 g/mol

Synonyms: bis(4-Isocyanalocyclohexyl)methane; Dicyclohexylmethane-4,4-diisocyanate; Hydrogenated MDI

U.S. EPA Carcinogenic Classification (IRIS): Not Listed in IRIS

PBT: Not Listed as Persistent, Bioaccumulative and Toxic

NTP: Not Listed by the National Toxicology Program

HAP: Not Listed as a Hazardous Air Pollutant by U.S. EPA

112r: Not Listed in Section 112r of the Clean Air Act

ACGIH: TLV-TWA 0.005 ppm or 54 ug/m^3; critical effects: respiratory and skin irritation

HSDB: Listed in the Hazardous Substances Data Bank.

respiratory and skin irritation

International IARC: Not Listed as an Agent Reviewed by IARC

ATSDR, MRL: Not Available

Reference Material

1. American Conference of Governmental Industrial Hygienists (ACGIH) 2006. *TLVs and BEIs: Based on the Documentation of the Threshold Limit Values for Chemical Substances and Physical Agents and Biological Exposure Indices*. Cincinnati, OH: ACGIH Worldwide.

2. Hazardous Substances Data Bank (HSDB), a database of the National Library of Medicine's TOXNET system

   http://toxnet.nlm.nih.gov

Completed by: 7, 2, 1, 2

Date: 8/23/06, 8/23/06, 4/11/14, 6/10/14

Toxic Compound Data Sheet

Name: Nitromethane

CAS Number: 75-52-5

Justification: This compound is listed in Ohio Administrative Code 3745 - 114 - 01 because it fulfills one or more of the following criteria: substances that are known to be, or may reasonably be anticipated to be, carcinogenic, mutagenic, teratogenic, or neurotoxic, causes reproductive dysfunction, is acutely or chronically toxic, or causes the threat of adverse environmental effects through ambient concentrations, bioaccumulation, or atmospheric deposition. Nitromethane can cause irritation of eyes, trachea skin; and lung damage.

Removal Justification: minimal risk TLV, used in commercial products (fuels)

Molecular Weight (g/mol): 61.04

Synonyms: Nitrocarbol

U.S. EPA Carcinogenic Classification (IRIS): Not listed on U.S. EPA Integrated Risk Information System (IRIS) database.

PBT: Not listed on U.S. EPA Persistent Bioaccumulative and Toxic (PBT) Chemical Program list.

NTP: Reasonably anticipated to be a human carcinogen (Part B).

HAP: Not listed on U.S. EPA Hazardous Air Pollutant (HAP) list.

112r: Not listed under Section 112(r) of the Clean Air Act.

ACGIH: TLV: 20 ppm or 49,930 µg/m^3. Confirmed animal carcinogen with unknown relevance to humans (A3). Critical effect: thyroid effect, respiration irritation, lung damage.

HSDB: Listed in the Hazardous Substances Data Bank. Exposure cause irritation of eyes, trachea, skin.

International IARC: Possibly carcinogenic to humans (Group 2B).

ATSDR, MRL: No minimum risk level (MRL) available from the Agency for Toxic Substances and Disease Registry (ATSDR).

Reference Material

1. U.S. Department of Health and Human Services. *11th Report on Carcinogens*. National Toxicology Program (NTP)
http://ntp.niehs.nih.gov/ntp/roc/eleventh/profiles/s123zntm.pdf

2. American Conference of Governmental Industrial Hygienists (ACGIH) 2006. *TLVs and BEIs: Based on the Documentation of the Threshold Limit Values for Chemical Substances and Physical Agents and Biological Exposure Indices*. Cincinnati, OH: ACGIH Worldwide.
3. Hazardous Substances Data Bank (HSDB), a database of the National Library of Medicine's TOXNET system (http://toxnet.nlm.nih.gov).
http://toxnet.nlm.nih.gov/cgi-bin/sis/search/f?./temp/~rzTr8E:1

4. International Agency for Research on Cancer (IARC)
http://monographs.iarc.fr/ENG/Classification/Listagentsalphorder.pd

http://monographs.iarc.fr/ENG/Monographs/vol77/volume77.pdf

Completed by; 1, 8, 7, 1, 2

Date: 8/25/06, 8/27/06, 3/31/14, 6/10/14

Toxic Compound Data Sheet

Name: Picric Acid

Cas Number: 00088-89-1

Justification: This compound is listed in Ohio Administrative Code 3745 - 114 - 01 because it fulfills one or more of the following criteria: substances that are known to be, or may reasonably be anticipated to be, carcinogenic, mutagenic, teratogenic, or neurotoxic, causes reproductive dysfunction, is acutely or chronically toxic, or causes the threat of adverse environmental effects through ambient concentrations, bioaccumulation, or atmospheric deposition. Picric acid can cause eye and skin irritation and skin sensitization.

Removal Justification: Irritant only

Molecular Weight: 229.11 g/mol

Synonyms: Carbanzotic acid; Picronitric acid; 2,4,6-Trinitrophenol

U.S. EPA Carcinogenic Classification (IRIS): Not Listed in IRIS

PBT: Not Listed as Persistent, Bioaccumulative and Toxic

NTP: Not Listed by the National Toxicology Program

HAP: Not Listed as a Hazardous Air Pollutant by U.S. EPA

112r: Not Listed in Section 112r of the Clean Air Act

ACGIH: TLV-TWA 100 ug/m^3. Critical effects: skin sensitization, dermatitis, eye irritation.

HSDB: Listed in the Hazardous Substances Data Bank.

International IARC: Not Listed as an Agent Reviewed by IARC

ATSDR, MRL: Not Available

Reference Material

1. American Conference of Governmental Industrial Hygienists (ACGIH) 2006. *TLVs and BEIs: Based on the Documentation of the Threshold Limit Values for Chemical Substances and Physical Agents and Biological Exposure Indices*. Cincinnati, OH: ACGIH Worldwide.

2. Hazardous Substances Data Bank (HSDB), a database of the National Library of Medicine's TOXNET system.

   http://toxnet.nlm.nih.gov

Completed by: 8, 9, 2, 1, 2

Date: 8/17/06, 8/25/06, 8/27/06, 4/11/14, 6/10/14

Toxic Compound Data Sheet

Name: Pindone

Cas Number: 00083-26-1

Justification: This compound is listed in Ohio Administrative Code 3745 - 114 - 01 because it fulfills one or more of the following criteria: substances that are

known to be, or may reasonably be anticipated to be, carcinogenic, mutagenic, teratogenic, or neurotoxic, causes reproductive dysfunction, is acutely or chronically toxic, or causes the threat of adverse environmental effects through ambient concentrations, bioaccumulation, or atmospheric deposition. Pindone can cause blood coagulation and hemorrhage.

Removal Justification: rodenticide

Molecular Weight: 230.25 g/mol

Synonyms: Pival; 2-Pivalyl-1,3-indandione; 2-Trimethylacetyl-1,3-indandione

U.S. EPA Carcinogenic Classification (IRIS): Not Listed in IRIS

PBT: Not Listed as Persistent, Bioaccumulative and Toxic

NTP: Not Listed by the National Toxicology Program

HAP: Not Listed as a Hazardous Air Pollutant by U.S. EPA

112r: Not Listed in Section 112r of the Clean Air Act

ACGIH: TLV-TWA 100 ug/m^3. Critical effects: coagulation.

HSDB: Listed in the Hazardous Substances Data Bank.

blood coagulation and hemorrhage

International IARC: Not Listed as an Agent Reviewed by IARC

ATSDR, MRL: Not Available

Reference Material

1. American Conference of Governmental Industrial Hygienists (ACGIH) 2006. *TLVs and BEIs: Based on the Documentation of the Threshold Limit Values for Chemical Substances and Physical Agents and Biological Exposure Indices*. Cincinnati, OH: ACGIH Worldwide.

2. Hazardous Substances Data Bank (HSDB), a database of the National Library of Medicine's TOXNET system.

   http://toxnet.nlm.nih.gov

3. NCBI, The PubChem Compound Database
   http://www.ncbi.nlm.nih.gov/pccompound?cmd=search

4. U.S. EPA, Pesticide Chemical Search database
   http://iaspub.epa.gov/apex/pesticides/f?p=CHEMICALSEARCH:1:0

Completed by: 8, 9, 2, 2 Date: 8/18/06, 8/215/06, 8/27/06, 6/12/14

Toxic Compound Data Sheet

Name: Piperazine dihydrochloride

Cas Number: 00142-64-3

Justification: This compound is listed in Ohio Administrative Code 3745 - 114 - 01 because it fulfills one or more of the following criteria: substances that are known to be, or may reasonably be anticipated to be, carcinogenic, mutagenic, teratogenic, or neurotoxic, causes reproductive dysfunction, is acutely or chronically toxic, or causes the threat of adverse environmental effects through ambient concentrations, bioaccumulation, or atmospheric deposition. Piperazine dihydrochloride can cause asthma, headaches, muscle weakness; eye, skin and respiratory irritation.

Removal Justification: used in consumer products (insecticide and pharmaceutical)

Molecular Weight: 159.05 g/mol

Synonyms: Dihydrochloride salt of diethylenediamine; Piperazidine hydrochloride

U.S. EPA Carcinogenic Classification (IRIS): Not Listed in IRIS

PBT: Not Listed as Persistent, Bioaccumulative and Toxic

NTP: Not Listed by the National Toxicology Program

HAP: Not Listed as a Hazardous Air Pollutant by U.S. EPA

112r: Not Listed in Section 112r of the Clean Air Act

ACGIH: TLV-TWA 5,000 ug/m^3. Critical effects: eye and skin irritation, skin sensitization, asthma.

HSDB: Listed in the Hazardous Substances Data Bank.

headaches, nausea, vomiting, diarrhea, lethargy and muscle weakness

International IARC: Not Listed as an Agent Reviewed by IARC

ATSDR, MRL: Not Available

Reference Material

1. American Conference of Governmental Industrial Hygienists (ACGIH) 2006. *TLVs and BEIs: Based on the Documentation of the Threshold Limit Values for Chemical Substances and Physical Agents and Biological Exposure Indices*. Cincinnati, OH: ACGIH Worldwide.

2. Hazardous Substances Data Bank (HSDB), a database of the National Library of Medicine's TOXNET system.

   http://toxnet.nlm.nih.gov

3. NCBI, The PubChem Compound Database
   http://www.ncbi.nlm.nih.gov/pccompound?cmd=search

4. U.S. EPA, Pesticide Chemical Search database
   http://iaspub.epa.gov/apex/pesticides/f?p=CHEMICALSEARCH:1:0

Completed by: 8, 9, 2, 2 Date: 8/18/06, 8/25/06, 8/27/06, 6/12/14

Toxic Compound Data Sheet

Name: Propargyl alcohol

CAS Number: 107-19-7

Justification: This compound is listed in Ohio Administrative Code 3745 - 114 - 01 because it fulfills one or more of the following criteria: substances that are known to be, or may reasonably be anticipated to be, carcinogenic, mutagenic, teratogenic, or neurotoxic, causes reproductive dysfunction, is acutely or chronically toxic, or causes the threat of adverse environmental effects through ambient concentrations, bioaccumulation, or atmospheric deposition. Propargyl alcohol can cause eye irritation, liver damage, and kidney damage.

Removal Justification: minimal risk TLV, irritant only.

Molecular Weight (g/mol): 56.06

Synonyms: 2-Propyn-1-ol; Ethynylcarbinol; HSDB 6054; Methanol, ethynyl-; NA 1986; NSC 8804; Propynyl alcohol; RCRA Waste Number P102; 1-Hydroxy-2-propyne; 1-Propyn-3-ol; 2-Propynol; 2-Propynyl alcohol; 3-Hydroxy-1-propyne; 2-Propyn-1-ol; 3-Propynol

U.S. EPA Carcinogenic Classification (IRIS): Oral RfD available

PBT: Not listed on (PBT) Chemical Program list.

NTP: Program (NTP) list.

HAP: Not listed on U.S. EPA Hazardous Air Pollutant (HAP) list.

112r: Not listed under Section 112(r) of the Clean Air Act.

ACGIH: TLV: 1 ppm or 2,293 $\mu g/m^3$. Critical effects: eye irritation, liver, kidney.

HSDB: Listed in the Hazardous Substances Data Bank.

International IARC: Not listed by International Agency for Research on Cancer (IARC).

ATSDR (MRL): No minimum risk level (MRL) available from the Agency for Toxic Substances and Disease Registry (ATSDR).

Reference Material

1. U.S. EPA Integrated Risk Information System (IRIS)

http://cfpub.epa.gov/iris/quickview.cfm?substance_nmbr=0468

2. American Conference of Governmental Industrial Hygienists (ACGIH) 2006. *TLVs and BEIs: Based on the Documentation of the Threshold Limit Values for Chemical Substances and Physical Agents and Biological Exposure Indices*. Cincinnati, OH: ACGIH Worldwide.

3. Hazardous Substances Data Bank (HSDB), a database of the National Library of Medicine's TOXNET system (http://toxnet.nlm.nih.gov).

Completed by: 3, 2, 1, 2

Date: 8/18/06, 8/27/06, 3/31/14, 6/10/14

Toxic Compound Data Sheet

Name: Propionic acid

CAS Number: 79-09-4

Justification: This compound is listed in Ohio Administrative Code 3745 - 114 - 01 because it fulfills one or more of the following criteria: substances that are

known to be, or may reasonably be anticipated to be, carcinogenic, mutagenic, teratogenic, or neurotoxic, causes reproductive dysfunction, is acutely or chronically toxic, or causes the threat of adverse environmental effects through ambient concentrations, bioaccumulation, or atmospheric deposition. Propionic acid may cause skin and respiratory irritation.

Removal Justification: minimal risk TLV, irritant only

Molecular Weight (g/mol): 74.08

Synonyms: Metacetonic acid; Bugle; Carboxyethane; Ethanecarboxylic acid; Ethylformic acid; hydroacrylic acid; Luprosil; Methylacetic acid; Propionic acid; Propionic Acid (Nat. C-3 Acid); Propcorn; prozoin; pseudoacetic acid; Sentry Grain Preservative; sentry grain preserver; Tenox P Grain Preservative

U.S. EPA Carcinogenic Classification (IRIS): Not listed on U.S. EPA (IRIS) database.

PBT: Not listed on U.S. EPA Persistent Bioaccumulative and Toxic (PBT) Chemical Program list.

NTP: Not listed on NTP list.

HAP: Not listed on U.S. EPA Hazardous Air Pollutant (HAP) list.

112r: Not listed under Section 112(r) of the Clean Air Act.

ACGIH: TLV: 10 ppm or 30,299 $\mu g/m^3$. Critical effect: eye, skin and respiratory irritation

HSDB: Listed in the Hazardous Substances Data Bank.

International IARC: Not listed by International Agency for Research on Cancer (IARC).

ATSDR (MRL): No minimum risk level (MRL) available from the Agency for Toxic Substances and Disease Registry (ATSDR).

Reference Material

1. American Conference of Governmental Industrial Hygienists (ACGIH) 2006. *TLVs and BEIs: Based on the Documentation of the Threshold Limit Values for Chemical Substances and Physical Agents and Biological Exposure Indices*. Cincinnati, OH: ACGIH Worldwide.

2. Hazardous Substances Data Bank (HSDB), a database of the National Library of Medicine's TOXNET system (http://toxnet.nlm.nih.gov).

Completed by: 3, 2, 1, 2

Date: 8/18/06, 08/27/06, 3/31/14, 6/10/14

Toxic Compound Data Sheet

Name: n-Propyl acetate

CAS Number: 109-60-4

Justification: This compound is listed in Ohio Administrative Code 3745 - 114 - 01 because it fulfills one or more of the following criteria: substances that are

known to be, or may reasonably be anticipated to be, carcinogenic, mutagenic, teratogenic, or neurotoxic, causes reproductive dysfunction, is acutely or chronically toxic, or causes the threat of adverse environmental effects through ambient concentrations, bioaccumulation, or atmospheric deposition. n-Propyl acetate can cause eye, skin and throat irritation.

Removal Justification: minimal risk TLV, irritant only, used in commercial products (flavor additive / fragrances)

Molecular Weight (g/mol): 102.13

Synonyms: Propylacetate, n-Propyl ester of acetic acid

U.S. EPA Carcinogenic Classification (IRIS): Not listed on U.S. EPA Integrated Risk Information System (IRIS) database.

PBT: Not listed on U.S. EPA Persistent Bioaccumulative and Toxic (PBT) Chemical Program list.

NTP: Not listed on U.S. Department of Health and Human Services National Toxicology Program (NTP) list.

HAP: Not listed on U.S. EPA Hazardous Air Pollutant (HAP) list.

112r: Not listed under Section 112(r) of the Clean Air Act.

ACGIH: TLV: 200 ppm or 835,419 $\mu g/m^3$. TLV STEL: 250 ppm or 1,044,274 $\mu g/m^3$. Critical effect: irritation.

HSDB: Listed in the Hazardous Substances Data Bank.

International IARC: Not listed by International Agency for Research on Cancer (IARC).

ATSDR (MRL): No minimum risk level (MRL) available from the Agency for Toxic Substances and Disease Registry (ATSDR).

Reference Material

1. Centers for Disease Control (CDC) National Institute of Occupational Safety and Health (NIOSH)

   http://www.cdc.gov/niosh/npg/npgd0532.html

2. American Conference of Governmental Industrial Hygienists (ACGIH) 2006. *TLVs and BEIs: Based on the Documentation of the Threshold Limit Values for Chemical Substances and Physical Agents and Biological Exposure Indices*. Cincinnati, OH: ACGIH Worldwide.

3. Hazardous Substances Data Bank (HSDB), a database of the National Library of Medicine's TOXNET system (http://toxnet.nlm.nih.gov).

Completed by: 3, 2, 1, 2

Date; 8/18/06, 08/27/06, 3/31/14, 6/10/14

Toxic Compound Data Sheet

Name: n-Propyl nitrate

CAS Number: 627-13-4

Justification: This compound is listed in Ohio Administrative Code 3745 - 114 - 01 because it fulfills one or more of the following criteria: substances that are known to be, or may reasonably be anticipated to be, carcinogenic, mutagenic, teratogenic, or neurotoxic, causes reproductive dysfunction, is acutely or chronically toxic, or causes the threat of adverse environmental effects through ambient concentrations, bioaccumulation, or atmospheric deposition. N-Propyl nitrate can cause eye, skin and respiratory irritation; blood, cyanosis, and anoxia.

Removal Justification: minimal risk TLV, irritant only

Molecular Weight (g/mol): 105.09

Synonyms: Nitric acid, Propyl ester

U.S. EPA Carcinogenic Classification (IRIS): Not listed on U.S. EPA Integrated Risk Information System (IRIS) database.

PBT: Not listed on U.S. EPA Persistent Bioaccumulative and Toxic (PBT) Chemical Program list.

NTP: Not listed on U.S. Department of Health and Human Services National Toxicology Program (NTP) list.

HAP: Not listed on U.S. EPA Hazardous Air Pollutant (HAP) list.

112r: Not listed under Section 112(r) of the Clean Air Act.

ACGIH: TLV: 25 ppm or 107,454 $\mu g/m^3$. TLV STEL: 40 ppm or 171,926 $\mu g/m^3$. . Critical effects: blood, cyanosis, anoxia.

HSDB: Listed in the Hazardous Substances Data Bank.

eye skin and respiratory irritation

International IARC: Not listed by International Agency for Research on Cancer (IARC).

ATSDR (MRL): No minimum risk level (MRL) available from the Agency for Toxic Substances and Disease Registry (ATSDR).

Reference Material

1. American Conference of Governmental Industrial Hygienists (ACGIH) 2006. *TLVs and BEIs: Based on the Documentation of the Threshold Limit Values for Chemical Substances and Physical Agents and Biological Exposure Indices*. Cincinnati, OH: ACGIH Worldwide.

2. Hazardous Substances Data Bank (HSDB), a database of the National Library of Medicine's TOXNET system (http://toxnet.nlm.nih.gov).

Completed by: 3, 2, 1, 2

Date: 8/18/06, 8/27/06, 4/1/14, 6/10/14

Toxic Compound Data Sheet

Name: Rotenone (commercial)

CAS Number: 83-79-4

Justification: This compound is listed in Ohio Administrative Code 3745 - 114 - 01 because it fulfills one or more of the following criteria: substances that are known to be, or may reasonably be anticipated to be, carcinogenic, mutagenic, teratogenic, or neurotoxic, causes reproductive dysfunction, is acutely or chronically toxic, or causes the threat of adverse environmental effects through ambient concentrations, bioaccumulation, or atmospheric deposition. Rotenone can cause central nervous system impairment; eye, GI and respiratory irritation.

Removal Justification: Regulated insecticide

Molecular Weight (g/mol): 391.41

Synonyms: Cube, Derrin, Derris, Derrisroot, Nicouline, Rotenone, Rotessenol, Tubatoxin

U.S. EPA Carcinogenic Classification (IRIS): Oral RfD available.

PBT: Not listed on U.S. EPA (PBT) Chemical Program list.

NTP: Not listed on (NTP) list.

HAP: Not listed on U.S. EPA Hazardous Air Pollutant (HAP) list.

112r: Not listed under Section 112(r) of the Clean Air Act.

ACGIH: TLV: 5 mg/m^3 or 5,000 $\mu g/m^3$. Critical effects: respiratory irritation, CNS impairment.

HSDB: Listed in the Hazardous Substances Data Bank.

eye, GI and respiratory irritation

International IARC: Not listed by International Agency for Research on Cancer (IARC).

ATSDR (MRL): No minimum risk level (MRL) available from the Agency for Toxic Substances and Disease Registry (ATSDR).

Reference Material

1. U.S. EPA Integrated Risk Information System (IRIS)

http://cfpub.epa.gov/iris/quickview.cfm?substance_nmbr=0344

2. American Conference of Governmental Industrial Hygienists (ACGIH) 2006. *TLVs and BEIs: Based on the Documentation of the Threshold Limit Values for Chemical Substances and Physical Agents and Biological Exposure Indices*. Cincinnati, OH: ACGIH Worldwide.

3. Hazardous Substances Data Bank (HSDB), a database of the National Library of Medicine's TOXNET system (http://toxnet.nlm.nih.gov)

4. NCBI, The PubChem Compound Database
http://www.ncbi.nlm.nih.gov/pccompound?cmd=search

5. U.S. EPA, Pesticide Chemical Search database
http://iaspub.epa.gov/apex/pesticides/f?p=CHEMICALSEARCH:1:0

Completed by: 3, 2, 2 Date: 8/21/06, 08/28/06, 6/12/14

Toxic Compound Data Sheet

Name: Sulfometuron methyl

Cas Number: 74222-97-2

Justification: This compound is listed in Ohio Administrative Code 3745 - 114 - 01 because it fulfills one or more of the following criteria: substances that are known to be, or may reasonably be anticipated to be, carcinogenic, mutagenic, teratogenic, or neurotoxic, causes reproductive dysfunction, is acutely or chronically toxic, or causes the threat of adverse environmental effects through ambient concentrations, bioaccumulation, or atmospheric deposition. Sulfometuron methyl can cause reproductive dysfunction; eye, skin and respiratory irritation.

Removal Justification: Regulated herbicide

Molecular Weight: 364.38 g/mol

Synonyms: Benzoic acid; o-((3-(4,6-dimethyl-2-pyrimidinyl)-ureido)sulfonyl)-methyl ester; Methyl-2-[[[[(4,6-Dimethyl-2-pyrimidinyl)-amino]carbonyl]amino]sulfonyl]benzoate ester

U.S. EPA Carcinogenic Classification (IRIS): Not Listed in IRIS

PBT: Not Listed as Persistent, Bioaccumulative and Toxic

NTP: Not Listed by the National Toxicology Program

HAP: Not Listed as a Hazardous Air Pollutant by U.S. EPA

112r: Not Listed in Section 112r of the Clean Air Act

ACGIH: TLV, TWA- 5,000 ug/m^3; Critical effects include: Hematologic effects.

International IARC: Not Listed as an Agent Reviewed by IARC

ATSDR, MRL: Not Available

Reference Material

1. American Conference of Governmental Industrial Hygienists (ACGIH) 2006. *TLVs and BEIs: Based on the Documentation of the Threshold Limit Values for Chemical Substances and Physical Agents and Biological Exposure Indices*. Cincinnati, OH: ACGIH Worldwide.

2. NCBI, The PubChem Compound Database
http://www.ncbi.nlm.nih.gov/pccompound?cmd=search

3. U.S. EPA, Pesticide Chemical Search database
http://iaspub.epa.gov/apex/pesticides/f?p=CHEMICALSEARCH:1:0

Completed by: 5, 2, 2

Date: 08/25/2006, 08/26/2006, 6/12/14

Toxic Compound Data Sheet

Name: Tellurium & compounds, as Te excluding hydrogen telluride

Cas Number: 13494-80-9

Justification: This compound is listed in Ohio Administrative Code 3745 - 114 - 01 because it fulfills one or more of the following criteria: substances that are known to be, or may reasonably be anticipated to be, carcinogenic, mutagenic, teratogenic, or neurotoxic, causes reproductive dysfunction, is acutely or chronically toxic, or causes the threat of adverse environmental effects through ambient concentrations, bioaccumulation, or atmospheric deposition. Tellurium & compounds can cause central nervous system impairment, cyanosis, liver damage.

Removal Justification: Minimal Risk TLV

HSDB: Listed in the Hazardous Substances Data Bank. Exposure causes garlic odor of breath, metallic taste, nausea, loss of appetite, and liver injury.

Molecular Weight: 127.60 g/mol

Synonyms: None

U.S. EPA Carcinogenic Classification (IRIS): Not Listed in IRIS

PBT: Not Listed as Persistent, Bioaccumulative and Toxic

NTP: Not Listed by the National Toxicology Program

HAP: Not Listed as a Hazardous Air Pollutant by U.S. EPA

112r: Not Listed in Section 112r of the Clean Air Act

ACGIH: TLV, TWA- 100 ug/m^3. Critical effects include: Central nervous system impairment, cyanosis, liver damage.

HSDB: Listed in the Hazardous Substances Data Bank. Exposure causes garlic odor of breath, metallic taste, nausea, loss of appetite, and liver injury.

International IARC: Not Listed as an Agent Reviewed by IARC

ATSDR, MRL: Not Available

Reference Material

1. American Conference of Governmental Industrial Hygienists (ACGIH) 2006. *TLVs and BEIs: Based on the Documentation of the Threshold Limit Values for Chemical Substances and Physical Agents and Biological Exposure Indices*. Cincinnati, OH: ACGIH Worldwide.

2. Hazardous Substances Data Bank (HSDB), a database of the National Library of Medicine's TOXNET system

   http://toxnet.nlm.nih.gov

Completed by: 1, 5 Date: 8/24/06, 8/27/06

Toxic Compound Data Sheet

Name: Terephthalic acid

Cas Number: 00100-21-0

Justification: This compound is listed in Ohio Administrative Code 3745 - 114 - 01 because it fulfills one or more of the following criteria: substances that are known to be, or may reasonably be anticipated to be, carcinogenic, mutagenic, teratogenic, or neurotoxic, causes reproductive dysfunction, is acutely or chronically toxic, or causes the threat of adverse environmental effects through ambient concentrations, bioaccumulation, or atmospheric deposition. Terephthalic acid can cause eye skin and respiratory irritation.

Removal Justification: Minimal risk TLV

Molecular Weight: 166.13 g/mol

Synonyms: p-Benzenedicarboxylic acid; 1,4-Benzenedicarboxylic acid; p-Dicarboxybenzene; p-Phthalic acid; TA 12; TA-MP; Tephthol; TPA; WR 16262

U.S. EPA Carcinogenic Classification (IRIS): Not Listed in IRIS

PBT: Not Listed as Persistent, Bioaccumulative and Toxic

NTP: Not Listed by the National Toxicology Program

HAP: Not Listed as a Hazardous Air Pollutant by U.S. EPA

112r: Not Listed in Section 112r of the Clean Air Act

ACGIH: TLV, TWA: 10,000 ug/m^3.

HSDB: Listed in the Hazardous Substances Data Bank. Since terephthalic acid is commercially produced mainly for the production of polyester fibers, films, and bottles, the probable routes of exposure are inhalation of dust and skin absorption of the compound during its production, use and disposal.

International IARC: Not Listed as an Agent Reviewed by IARC

ATSDR, MRL: Not Available

Reference Material

1. American Conference of Governmental Industrial Hygienists (ACGIH) 2006. *TLVs and BEIs: Based on the Documentation of the Threshold Limit Values for Chemical Substances and Physical Agents and Biological Exposure Indices*. Cincinnati, OH: ACGIH Worldwide.

2. Hazardous Substances Data Bank (HSDB), a database of the National Library of Medicine's TOXNET system

   http://toxnet.nlm.nih.gov

Completed by: 1, 5, 1, 2

Date: 8/24/06, 8/27/06, 3/31/14, 6/10/14

Toxic Compound Data Sheet

Name: Tetraethyl pyprophosphate (TEPP)

Cas Number: 00107-49-3

Justification: This compound is listed in Ohio Administrative Code 3745 - 114 - 01 because it fulfills one or more of the following criteria: substances that are known to be, or may reasonably be anticipated to be, carcinogenic, mutagenic, teratogenic, or neurotoxic, causes reproductive dysfunction, is acutely or chronically toxic, or causes the threat of adverse environmental effects through ambient concentrations, bioaccumulation, or atmospheric deposition. TEEP can cause skin damage and cholinesterase inhibition.

Removal Justification: only occupational exposure, regulated pesticide

Molecular Weight: 290.20 g/mol

Synonyms: None

U.S. EPA Carcinogenic Classification (IRIS): Not Listed in IRIS

PBT: Not Listed as Persistent, Bioaccumulative and Toxic

NTP: Not Listed by the National Toxicology Program

HAP: Not Listed as a Hazardous Air Pollutant by U.S. EPA

112r: Not Listed in Section 112r of the Clean Air Act

ACGIH: TLV, TWA: 50 ug/m^3. Critical effects include: Skin damage and cholinesterase inhibition.

HSDB: Listed in the Hazardous Substances Data Bank. TEPP can be absorbed by the eye, eyelid, and surrounding tissues, causing prompt miosis.

International IARC: Not Listed as an Agent Reviewed by IARC

ATSDR, MRL: Not Available

Reference Material

1. American Conference of Governmental Industrial Hygienists (ACGIH) 2006. *TLVs and BEIs: Based on the Documentation of the Threshold Limit Values for Chemical Substances and Physical Agents and Biological Exposure Indices*. Cincinnati, OH: ACGIH Worldwide.

2. Hazardous Substances Data Bank (HSDB), a database of the National Library of Medicine's TOXNET system

   http://toxnet.nlm.nih.gov

3. NCBI, The PubChem Compound Database
   http://www.ncbi.nlm.nih.gov/pccompound?cmd=search

4. U.S. EPA, Pesticide Chemical Search database
   http://iaspub.epa.gov/apex/pesticides/f?p=CHEMICALSEARCH:1:0

Completed by: 1, 5, 2 Date: 08/24/06, 8/27/06, 6/12/14

Toxic Compound Data Sheet

Name: Thiram

CAS Number: 137-26-8

Justification: This compound is listed in Ohio Administrative Code 3745 - 114 - 01 because it fulfills one or more of the following criteria: substances that are known to be, or may reasonably be anticipated to be, carcinogenic, mutagenic, teratogenic, or neurotoxic, causes reproductive dysfunction, is acutely or chronically toxic, or causes the threat of adverse environmental effects through ambient concentrations, bioaccumulation, or atmospheric deposition. Thiram can be toxic with teratogenic and reproductive effects, plus ocular irritation, coughing, thoracic pain, tachycardia, epistaxis, dermal lesions, myocardiodystrophia, liver dysfunction and asthenia, and enlargement of thyroid gland.

Removal Justification: Used in commercial products (pesticide)

Molecular Weight (g/mol): 240.44

Synonyms: Aatack; Accelerator thiuram; Aceto tetd alpha, alpha'-Dithiobis (dimethylthio)formamide; Arasan; Arasan 70; Arasan 75; Arasan-m; Arasan 42-s; Arasan-sf; Arasan-sf-x; Aules; bis((Dimethylamino)carbonothioyl) disulphide; bis(Dimethyl-thiocarbamoyl)-disulfid; bis(Dimethylthiocarbamoyl) disulfide; bis(Dimethylthiocarbamoyl) disulphide; bis(Dimethylthiocarbamyl) disulfide; Cyuram ds; Disolfuro di tetrametiltiourame; Disulfure de tetramethylthiourame; Ekagom tb; Falitiram; Fermide; Fernacol; Fernasan; Fernasan a; Fernide; Flo Pro T Seed Protectant; Formamide, 1,1'-dithiobis(n,n-dimethylthio-; Hermal; Hermat tmt; Heryl; Hexathir; Kregasan; Mercuram; Methyl thiram; Methyl thiuramdisulfide; Methyl tuads; NA 2771; n,n'-(Dithiodicarbonothioyl)bis(n-methylmethanamine); n,n,n',n'-Tetramethylthiuram disulfide; n,n-Tetramethylthiuram disulphide; Nobecutan; Nomersan; Normersan; Panoram 75; Polyram ultra; Pomarsol; Pomarsol forte; Pomasol; Puralin; RCRA Waste Number U244; Rezifilm; Royal tmtd; Sadoplon; Spotrete; Spotrete-f; SQ 1489; Teramethyl thiuram disulfide; Tersan; Tersan 75; Tetramethyldiurane sulphite; Tetramethylenethiuram disulphide; Tetramethylthiocarbamoyldisulphide; Tetramethylthioramdisulfide; Tetramethyl-thiram disulfid; Tetramethylthiuram; Tetramethylthiuram bisulfide; Tetramethylthiuram disulfide; Tetramethyl thiurane disulfide; Tetramethylthiurum disulfide; Tetrapom; Tetrasipton; Tetrathiuram disulfide; Thillate; Thimer; Thiosan; Thiotex; Thiotox; Thiram; Thiram 75; Thiramad; Thiram b; Thirame; Thirasan; Thiulix; Thiurad; Thiuram; Thiuram d; Thiuram disulfide, tetramethyl-; Thiuramin; Thiuram m; Thiuramyl; Thylate; Tirampa; Tiuram; Tiuramyl; TMTD; TMTDS; Trametan; Tridipam; Tripomol; TTD; Tuads; Tuex; Tulisan; USAF B-30; USAF EK-2089; USAF P-5;

Vancida TM-95; Vancide TM; Vuagt-I-4; Vulcafor tmtd; Vulkacit mtic; Vulkacit thiuram; Vulkacit thiuram/c

U.S. EPA Carcinogenic Classification (IRIS): Oral RfD available. Chronically toxic.

PBT: Not listed on as Persistent Bioaccumulative or Toxic (PBT).

NTP: Not listed on the National Toxicology Program (NTP) list.

HAP: Not listed on U.S. EPA Hazardous Air Pollutant (HAP) list.

112r: Not listed under Section 112(r) of the Clean Air Act.

ACGIH: TLV: 1 mg/m^3 or 1,000 $\mu g/m^3$. Not classifiable as a human carcinogen (A4). Critical effect: irritation, teratogenic effects, reproductive effects.

HSDB: Listed in the Hazardous Substances Data Bank. Toxic effects include ocular irritation, coughing, thoracic pain, tachycardia, epistaxis, dermal lesions, myocardiodystrophia, liver dysfunction and asthenia, and enlargement of thyroid gland.

International IARC: Not classifiable as to carcinogenicity to humans (Group 3).

ATSDR (MRL): No minimum risk level (MRL) available from the Agency for Toxic Substances and Disease Registry (ATSDR).

Reference Material

1. U.S. EPA Integrated Risk Information System (IRIS)

   http://cfpub.epa.gov/iris/quickview.cfm?substance_nmbr=0267

2. American Conference of Governmental Industrial Hygienists (ACGIH) 2006. *TLVs and BEIs: Based on the Documentation of the Threshold Limit Values for Chemical Substances and Physical Agents and Biological Exposure Indices*. Cincinnati, OH: ACGIH Worldwide.

3. Hazardous Substances Data Bank (HSDB), a database of the National Library of Medicine's TOXNET system http://toxnet.nlm.nih.gov

4. International Agency for Research on Cancer (IARC)

http://monographs.iarc.fr/ENG/Classification/Listagentsalphorder.pdf

http://monographs.iarc.fr/ENG/Monographs/allmonos30.php

Completed by: 1, 3, 1, 2

Date: 8/24/06, 8/27/06, 4/14/14, 6/10/14

Toxic Compound Data Sheet

Name: 1,3,5-Triglycidyl-s-triazinetrione

CAS Number: 2451-62-9

Justification: This compound is listed in Ohio Administrative Code 3745 - 114 - 01 because it fulfills one or more of the following criteria: substances that are known to be, or may reasonably be anticipated to be, carcinogenic, mutagenic, teratogenic, or neurotoxic, causes reproductive dysfunction, is acutely or chronically toxic, or causes the threat of adverse environmental effects through ambient concentrations, bioaccumulation, or atmospheric deposition. 1,3,5-Triglycidyl-s-triazinetrione can cause allergic reactions and male reproductive damage.

Removal Justification: Irritant only, mild toxicity. Medical use (used for chemotherapy).

Molecular Weight (g/mol): 297.25

Synonyms: 1,3,5-Triglycidyl Isocyanurate, TGIC; Triglycidylisocyanurate

U.S. EPA Carcinogenic Classification (IRIS): Not listed on U.S. EPA Integrated Risk Information System (IRIS) database.

PBT: Not listed on U.S. EPA Persistent Bioaccumulative and Toxic (PBT) Chemical Program list.

NTP: Not listed on U.S. Department of Health and Human Services National Toxicology Program (NTP) list.

HAP: Not listed on U.S. EPA Hazardous Air Pollutant (HAP) list.

112r: Not listed under Section 112(r) of the Clean Air Act.

ACGIH: TLV: 0.05 mg/m^3 or 50 $\mu g/m^3$. Critical effects: male reproductive damage.

HSDB: Listed in the Hazardous Substances Data Bank. Can cause allergic reactions and asthma.

International IARC: Not listed by International Agency for Research on Cancer (IARC).

ATSDR (MRL): No minimum risk level (MRL) available from the Agency for Toxic Substances and Disease Registry (ATSDR).

Reference Material

1. American Conference of Governmental Industrial Hygienists (ACGIH) 2006. *TLVs and BEIs: Based on the Documentation of the Threshold Limit Values for Chemical Substances and Physical Agents and Biological Exposure Indices*. Cincinnati, OH: ACGIH Worldwide.

2. Hazardous Substances Data Bank (HSDB), a database of the National Library of Medicine's TOXNET system (http://toxnet.nlm.nih.gov).

Completed by: 1, 3, 1, 2 Date: 8/25/06, 8/28/06, 4/16/14, 6/10/14

Toxic Compound Data Sheet

Name: Trimethyl phosphite

CAS Number: 000121-45-9

Justification: This compound is listed in Ohio Administrative Code 3745 - 114 - 01 because it fulfills one or more of the following criteria: substances that are known to be, or may reasonably be anticipated to be, carcinogenic, mutagenic, teratogenic, or neurotoxic, causes reproductive dysfunction, is acutely or chronically toxic, or causes the threat of adverse environmental effects through ambient concentrations, bioaccumulation, or atmospheric deposition. Trimethyl phosphite can cause eye irritation and cholinesterase inhibition.

Removal Justification: minimal risk TLV

Molecular Weight (g/mol): 124.08

Synonyms: Methyl phosphite, Trimethoxyphosphine, Trimethyl ester of phosphorous acid

U.S. EPA Carcinogenic Classification (IRIS): Not listed on U.S. EPA Integrated Risk Information System (IRIS) database.

PBT: Not listed on U.S. EPA Persistent Bioaccumulative and Toxic (PBT) Chemical Program list.

NTP: Not listed on U.S. Department of Health and Human Services National Toxicology Program (NTP) list.

HAP: Not listed on U.S. EPA Hazardous Air Pollutant (HAP) list.

112r: Not listed under Section 112(r) of the Clean Air Act.

ACGIH: TLV: 2 ppm or 10,150 $\mu g/m^3$. Critical effect: eye irritant, cholinesterase inhibition.

HSDB: Listed in the Hazardous Substances Data Bank. Studies of workers with average exposures generally between 0.3 and 4 ppm, with occasional values as high as 15 ppm. Examination of 179 employees in these plants failed to reveal any indications of ocular changes or other adverse effects on worker health associated with occupational exposure to trimethyl phosphite.

International IARC: Not listed by International Agency for Research on Cancer (IARC).

ATSDR (MRL): No minimum risk level (MRL) available from the Agency for Toxic Substances and Disease Registry (ATSDR).

Reference Material

1. American Conference of Governmental Industrial Hygienists (ACGIH) 2006. *TLVs and BEIs: Based on the Documentation of the Threshold Limit Values for Chemical Substances and Physical Agents and Biological Exposure Indices*. Cincinnati, OH: ACGIH Worldwide.

2. Hazardous Substances Data Bank (HSDB), a database of the National Library of Medicine's TOXNET system (http://toxnet.nlm.nih.gov).

Completed by: 1, 3, 1, 2

Date: 8/25/06, 8/28/06, 3/31/14, 6/10/14

Toxic Compound Data Sheet

Name: Triphenyl phosphate

CAS Number: 115-86-6

Justification: This compound is listed in Ohio Administrative Code 3745 - 114 - 01 because it fulfills one or more of the following criteria: substances that are known to be, or may reasonably be anticipated to be, carcinogenic, mutagenic, teratogenic, or neurotoxic, causes reproductive dysfunction, is acutely or chronically toxic, or causes the threat of adverse environmental effects through ambient concentrations, bioaccumulation, or atmospheric deposition. Triphenyl phosphate can cause reduction in red blood cell cholinesterase activity.

Removal Justification: minimal risk TLV.

Molecular Weight (g/mol): 326.28

Synonyms: Phenyl phosphate, TPP, Triphenyl ester of phosphoric acid

U.S. EPA Carcinogenic Classification (IRIS): Not listed on U.S. EPA Integrated Risk Information System (IRIS) database.

PBT: Not listed on U.S. EPA Persistent Bioaccumulative and Toxic (PBT) Chemical Program list.

NTP: Not listed on U.S. Department of Health and Human Services National Toxicology Program (NTP) list.

HAP: Not listed on U.S. EPA Hazardous Air Pollutant (HAP) list.

112r: Not listed under Section 112(r) of the Clean Air Act.

ACGIH: TLV: 3 mg/m^3 or 3,000 $\mu g/m^3$. Not classifiable as a human carcinogen (A4). Critical effects: Cholnesterase inhibition.

HSDB: Listed in the Hazardous Substances Data Bank. Exposure studies showed no signs of illnesses, but a slight statistically significant reduction in red blood cell cholinesterase activity.

International IARC: Not listed by International Agency for Research on Cancer (IARC).

ATSDR (MRL): No minimum risk level (MRL) available from the Agency for Toxic Substances and Disease Registry (ATSDR).

Reference Material

1. American Conference of Governmental Industrial Hygienists (ACGIH) 2006. *TLVs and BEIs: Based on the Documentation of the Threshold Limit Values for Chemical Substances and Physical Agents and Biological Exposure Indices*. Cincinnati, OH: ACGIH Worldwide.

2. Hazardous Substances Data Bank (HSDB), a database of the National Library of Medicine's TOXNET system (http://toxnet.nlm.nih.gov).

Completed by: 1, 3, 1, 2

Date: 8/25/06, 8/28/06, 3/31/14, 6/10/14

Toxic Compound Data Sheet

Name: Tungsten, as W Soluble Compounds

Cas Number: 07440-33-7

Justification: This compound is listed in Ohio Administrative Code 3745 - 114 - 01 because it fulfills one or more of the following criteria: substances that are known to be, or may reasonably be anticipated to be, carcinogenic, mutagenic, teratogenic, or neurotoxic, causes reproductive dysfunction, is acutely or chronically toxic, or causes the threat of adverse environmental effects through ambient concentrations, bioaccumulation, or atmospheric deposition. Tungsten can cause CNS impairment.

Removal Justification: Minimal risk TLV; used in radiological exams

Molecular Weight (g/mol): none

Synonyms: W

U.S. EPA Carcinogenic Classification (IRIS): Not Listed in IRIS

PBT: Not Listed as Persistent, Bioaccumulative and Toxic

NTP: Not Listed by the National Toxicology Program

HAP: Not Listed as a Hazardous Air Pollutant by U.S. EPA

112r: Not Listed in Section 112r of the Clean Air Act

ACGIH: TLV, TWA- 1,000 ug/m^3; Critical Effects: Central nervous system impairment, pulmonary fibrosis.

HSDB: Listed in the Hazardous Substances Data Bank.

International IARC: Not Listed as an Agent Reviewed by IARC

ATSDR, MRL: Not Available

Reference Material

1. American Conference of Governmental Industrial Hygienists (ACGIH) 2006. *TLVs and BEIs: Based on the Documentation of the Threshold Limit Values for Chemical Substances and Physical Agents and Biological Exposure Indices*. Cincinnati, OH: ACGIH Worldwide.

2. Hazardous Substances Data Bank (HSDB), a database of the National Library of Medicine's TOXNET system (http://toxnet.nlm.nih.gov).

Completed by: 1, 3, 1, 2

Date: 8/25/06, 8/28/06, 4/16/14, 6/10/14

Toxic Compound Data Sheet

Name: m-Xylene *a,a* -diamine

Cas Number: 01477-55-0

Justification: This compound is listed in Ohio Administrative Code 3745 - 114 - 01 because it fulfills one or more of the following criteria: substances that are known to be, or may reasonably be anticipated to be, carcinogenic, mutagenic, teratogenic, or neurotoxic, causes reproductive dysfunction, is acutely or chronically toxic, or causes the threat of adverse environmental effects through ambient concentrations, bioaccumulation, or atmospheric deposition. m-Xylene *a,a* – diamine can cause eye, skin and GI irritation.

Removal Justification: Minimal risk TLV

Molecular Weight (g/mol): 136.20

Synonyms: None

U.S. EPA Carcinogenic Classification (IRIS): Not Listed in IRIS

PBT: Not Listed as Persistent, Bioaccumulative and Toxic

NTP: Not Listed by the National Toxicology Program

HAP: Not Listed as a Hazardous Air Pollutant by U.S. EPA

112r: Not Listed in Section 112r of the Clean Air Act

ACGIH: TLV, TWA- Ceiling 100 ug/m^3

HSDB: Listed in the Hazardous Substances Data Bank.

International IARC: Not Listed as an Agent Reviewed by IARC

ATSDR, MRL: Not Available

OSHA Standards: Permissible Exposure Limit: Table Z-1 8-hr Time Weighted Avg: 100 ppm (435 mg/m^3)

Reference Material

1. American Conference of Governmental Industrial Hygienists (ACGIH) 2006. *TLVs and BEIs: Based on the Documentation of the Threshold Limit Values for Chemical Substances and Physical Agents and Biological Exposure Indices*. Cincinnati, OH: ACGIH Worldwide.

2. Hazardous Substances Data Bank (HSDB), a database of the National Library of Medicine's TOXNET system (http://toxnet.nlm.nih.gov)

3. Xylenes (o-, m-, p-isomers)/[29 CFR 1910.1000 (USDOL); U.S. National Archives and Records Administration's Electronic Code of Federal Regulations. Available from, as of October 2, 2008: http://www.gpoaccess.gov/ecfr **PEER REVIEWED**

Completed by: 1, 3, 1, 2

Date: 8/24/06, 8/27/06, 4/16/14, 6/10/14

Toxic Compound Data Sheet

Name: Xylidine (mixed isomers)

Cas Number: 01300-73-8

Justification: This compound is listed in Ohio Administrative Code 3745 - 114 - 01 because it fulfills one or more of the following criteria: substances that are known to be, or may reasonably be anticipated to be, carcinogenic, mutagenic, teratogenic, or neurotoxic, causes reproductive dysfunction, is acutely or chronically toxic, or causes the threat of adverse environmental effects through ambient concentrations, bioaccumulation, or atmospheric deposition. Xylidine can be toxic and can cause methemoglobinemia, headache and dizziness.

Removal Justification: Minimal risk TLV; used in consumer products (production of pigments, dyestuffs, various antioxidants, agrochemicals, and pharmaceuticals).

Molecular Weight (g/mol): 121.18

Synonyms: Aminodimethylbenzene; Aminoxylene; Dimethylaniline

U.S. EPA Carcinogenic Classification (IRIS): Not Listed in IRIS

PBT: Not Listed as Persistent, Bioaccumulative and Toxic

NTP: Not Listed by the National Toxicology Program

HAP: Not Listed as a Hazardous Air Pollutant by U.S. EPA

112r: Not Listed in Section 112r of the Clean Air Act

ACGIH: TLV, TWA- 0.5 ppm or 2,478 ug/m^3; A3- Confirmed Animal Carcinogen with Unknown Relevance to Humans

HSDB: Listed in the Hazardous Substances Data Bank. Xylidine intoxication causes methemoglobinemia, headache and dizziness.

International IARC: Not Listed as an Agent Reviewed by IARC

ATSDR, MRL: Not Available

Reference Material

1. American Conference of Governmental Industrial Hygienists (ACGIH) 2005. *TLVs and BEIs: Based on the Documentation of the Threshold Limit Values for Chemical Substances and Physical Agents and Biological Exposure Indices*. Cincinnati, OH: ACGIH Worldwide.

2. Hazardous Substances Data Bank (HSDB), a database of the National Library of Medicine's TOXNET system. http://toxnet.nlm.nih.gov

Completed by: 1, 3, 1, 2

Date: 8/24/06, 8/27/06, 4/17/14, 6/10/14

Toxic Compound Data Sheet

Name: Yttrium, as Y & compounds

Cas Number: 01300-73-8 duplicate

Justification: This compound is listed in Ohio Administrative Code 3745 - 114 - 01 for the following reason(s): it is a compound that has been determined to be carcinogenic, mutagenic, teratogenic, or neurotoxic, causes reproductive dysfunction, is acutely or chronically toxic, and causes the threat of adverse environmental effects through ambient concentrations, bioaccumulation, or atmospheric deposition. Yttrium can cause pulmonary fibrosis in rats.

Removal Justification: Minimal risk TLV

Molecular Weight (g/mol): 88.91

Synonyms: None

U.S. EPA Carcinogenic Classification (IRIS): Not Listed in IRIS

PBT: Not Listed as Persistent, Bioaccumulative and Toxic

NTP: Not Listed by the National Toxicology Program

HAP: Not Listed as a Hazardous Air Pollutant by U.S. EPA

112r: Not Listed in Section 112r of the Clean Air Act

ACGIH: TLV, TWA- 1,000 ug/m^3. Causes pulmonary fibrosis in rats.

HSDB: Not listed in the Hazardous Substances Data Bank.

International IARC: Not Listed as an Agent Reviewed by IARC

ATSDR, MRL: Not Available

Reference Material.

1. American Conference of Governmental Industrial Hygienists (ACGIH) 2006. *TLVs and BEIs: Based on the Documentation of the Threshold Limit Values for Chemical Substances and Physical Agents and Biological Exposure Indices*. Cincinnati, OH: ACGIH Worldwide.

2. Hazardous Substances Data Bank (HSDB), a database of the National Library of Medicine's TOXNET system (http://toxnet.nlm.nih.gov).

Completed by: 1, 3, 1, 2

Date: 8/24/06, 8/27/06, 4/17/14, 6/10/14