Silicone is the main ingredient used in the gel and **the envelopes of all breast implants**. Silicone is a man-made substance which is made using silica and many other chemicals and compounds. Many of these chemicals are carcinogens, and most are neurotoxins. Information on this page lists the chemicals contained in silicone and defiines the properties and exposure information of each. Some of the chemicals are listed vaguely in the court records where they were obtained, and an accurate description is not possible.

Chemicals Found in Silicone Gel:

*1. Methyl Ethyl Ketone - neurotoxin
*2. Cyclohexanone - neurotoxin
*3. Isopropyl Alcohol (Isopropanol)
*4. Denatured Alcohol (Ethanol)
*5. Acetone - neurotoxin
*6. Urethane (Ethyl Carbamate)
*7. Polyvinyl Chloride (Liquid Vinyl) - neurotoxin
*8. Ethyl Acetate - neurotoxin
*9. Amine
10. Toluene - carcinogen/neurotoxin
11. Dichloromethan (Methylene Chloride) - carcinogen at any exposure level
12. Freon (Chloromethane)
13. Silicone
14. Flux (Sodium Flouride)
15. Solder (lead-based solder)
16. Lofol (Formaldehyde)
17. Talcum Powder
18. Oakite (Trisodium Phosphate)
19. Eastman 910 Glue (Methyl 2-cyanoacylates)
20. Ethylene Oxide (ETO) - carcinogen
21. Carbob Black - carciongen at any exp. level
22. Xylene - neurotoxin
23. Hexone
24. 2-Hexanone
25. Thixon-OSN-2
26. Antioxidant (Rubber)
27. Stearic Acid
28. Zinc Oxide
29. Naptha (Rubber Solvent)
30. Phenol - neurotoxin
31. Benzene - carcinogen/neurotoxin
32. Lacquer Thinner
33. Epoxy Resin
34. Epoxy Hardener 10 & 11
35. Printing Ink
36. Metal Cleaning Acid
37. Color Pigments as Release Agents

Detailed Definitions and Information on Each Chemical:

Note: Information on individual chemicals that is available on the HSDB (Hazardous Substances Data Base) is indicated by the letters, HSDB, prior to each link. The

HSDB is an excellent source for a detailed description of each chemical. To visit each page on each chemical, you must enter the chemical name in the search box provided with each link below. The search results are temporary and disappear in 2.5 hours.

1. METHYL ETHYL KETONE

TN/synonyms: Ethyl Methyl Ketone, MEK, Methyl Acetone, 2-Butanone.

OSHA PEL: 200 ppm - 8 hr/dy-40hr/wk
590mg/m3 - 8hr/dy-40hr/wk
300 ppm -exposure not to exceed
15 minutes
885 mg/m3 - exposure not to exceed
15 minutes

ATSDR MRL: 0.1 ppm - Inhalation less than 15 days

IDLH: 3,000 ppm

Symptoms: Eye, nasal, throat, and upper respiratory irritation; Headaches; Weakness; Lightheadedness; Dizziness; Vomiting; Numbness of extremities; Muscle weakness; Nausea; Loss of coordination; Respiratory system effects; Temporary blindness; Fatigue; Nerve inflammation behind the eyes. Suspected of causing Developmental effects.

End Point Targets: Central Nervous System, Lungs.

Potentiation: In combination with other solvents it becomes a very hazardous neurotoxin.

Synergistic effect: Off-gasses formaldehyde when burned.

Note: Research suggests that humans are more sensitive than other species tested.

Classification: Organic solvent (Ketone compound)

Methyl Ethyl Ketone - Links

- HSDB - Methyl Ethyl Ketone - Enter Chemical Name

2. CYCLOHEXANONE

TN/synonyms: Cyclohexyl ketone, Pimelic ketone.

OSHA PEL: 25 ppm - 8hr/dy-40hr/wk
100 ppm - 8hr/dy-40hr/wk
IDLH: 5,000 ppm

Symptoms:

Eye and mucous membrane irritation, Headaches, Unconsciousness due to narcotic effects, Coma, Dermatitis, Suspected of causing Birth Defects, Reproductive effects, Developmental effects, Neonatal lethality, Tearing, Weight loss, Lethargy, Unexpanded fetal lungs at birth, Pulmonary damage, Edema, and Hemmorrhaging, Intestinal congestion, Incoordination, Tremors, Hypothermia.

Known Neurotoxin

Cyclohexanone - Links

- HSDB - Cyclohexanone - Enter Chemical Name

3. ISOPROPYL ALCOHOL - ISOPROPANOL

View Links Below

Isopropyl Alcohol (Isopropanol) - Links

- HSDB - Isopropanol - Enter Chemical Name

4. DENATURED ALCOHOL

Information forthcoming.

Denatured Alcohol (Ethanol) - Links

- HSDB - Ethanol - Enter Chemical Name

5. ACETONE

(Commonly known as Nail Polish Remover)

TN/sysnonyms: Dimethyl ketone, Ketone propane, Propanone, 2-Propanone, beta-Ketopropane, Methyl ketone.

NIOSH REL: 250 ppm - 10 hrs/dy - 40 hr/wk
590 mg/m3 - 10hrs/dy - 40 hr/wk

OSHA PEL: 750 ppm - 8 hr/dy - 40hr/wk
1,800 mg/m3 - 8hr/dy-40hr/wk
1,000 ppm - not to exceed 15 min.
2,400 mg/m3 -not to exceed 15 min.

IDLH 1,000 ppm

Symptoms:

Eye, nasal, and throat irritation; Belligerence; Alcoholic psychosis, Boastfulness, Bronchitis, Circulatory failure; Cold, pale skin; Coma; Collapse; Conjunctivitis; Convulsions; Death; Defatting dermatitis; Dilated pupils; Dizziness; Double vision; Drowsiness; Emotional liability; Exhilaration; Flushed face; Gastritis; Gastroduodenitis; Headaches; Hearing loss; Heart rate over 100 beats per minute; Hypothermia; Impaired or absent tendon reflexes; Incontinence; Incoordination; Increased susceptibility to infection; Inflammation of airway, stomach, and duodenum; Liver injury; Loss of sensation; Low blood pressure; Nausea; Peripheral vascular collapse; Pharyngitis; Pneumonia; Profuse sweating; Rapid pulse; Remorse; Renal lesions; Respiratory failure; Restlessness; Sensory disturbances; Shock; Slowed reaction time; Slurred speech; Stupor; Talkativeness; Veritgo; Vomiting blood; Vomiting; Weakness.
Suspected of causing: Adverse spermatogenic effects, Low birth weight, Neonate lethality.

End Point Targets: Respiratory ystem, Eyes, and
Skin.

Classification: Organic solvent (Ketone compound), Polar volatile organic compounds.

Note: Found in the blood and urine in diabetes and other metabolic disorders.

Known Neurotoxin

Acetone - Links

- Acetone

6. URETHANE

View Links Below

Urethane (Ethyl Carbamate) - Links

- HSDB - Urethane - Ethyl Carbamate - Enter Chemical Name

7. POLYVINYL CHLORIDE (LIQUID VINYL)

TN/Synonyms: Chloroethene, Chloroethylene, Ethylene monochloride, Monochloroethylene, VC, Vinyl chloride monomer, VCM, 1-Chloroethylene.

NIOSH: Carcinogen at any exposure level. Reduce exposure to lowest reliably
detectable concentration.

OSHA PEL: 1 ppm - 8hr/dy - 40hr/wk
5 ppm - Ceiling limit, 15 min exposure.

ATSDR MRL: 0.006 ppm - Inhalation, more than 14 days

ACGIH: Confirmed human carcinogen

IDLH: NIOSH - Carcinogen

Symptoms:

Pulmonary and kidney irritation; Abdominal pains; Abnormal Chest xrays; Abnormal decrease in blood platelets; Acroosteolysis (dissolution of the finger tips); Autoimmune responses similar to sclerosis; Benign uterine growths; Binds to IgG protein; Blockage of blood vessels; Cancer: (CNS, Respiratory tract, lymphatic, and blood);
Cyanosis of extremities; Death; Decreased libido; Decreased Respiratory function; Discomfort upon exposure to cold; Dizziness; Drowsiness; Emphysema; Euphoria; Gastrointestinal bleeding; Headaches; Impotency; Inhibits blood clotting; Joint and Muscle pain; Liver damage and enlargement; Loss of consciousness; Menstrual disturbances; Nausea; Numbness; Ovarian dysfunction; Pallor; Peripheral neuropathy; Pregnant toxemia; Prolapsed genital organs; Pulmonary fibrosis; Raynaud's phenomenon symptoms (aka Vinyl Chloride Disease); Scleroderma-like skin changes; Systemic sclerosis; Scleroderma; Spontaneous abortions; Stiff hands; Thickening of blood vessel walls and skin; Weakness; Autoimmune disease.
Suspected of causing Birth defects, and Testicular damage.

End-point Targets: Liver, Central Nervous System, Blood, Lymphatic system

Additives/Contaminants: Stabilized with inhibitors such as phenol.

Note: Occupational exposure of males has been associated with increased rates of spontaneous abortions in their spouses.

Known Neurotoxin.

Polyvinyl Chloride - Vinyl Chloride - Links

- Vinyl Chloride
- Vinyl Chloride
- HSDB - Vinyl Chloride - Enter Chemical Name

8. ETHYL ACETATE

TSN/Synonyms: Acetic ester, Acetic ether, Ethyl ester of acetic acid, Ethyl ethanoate.

OSHA PEL: 400ppm - 8hr/dy-40hr/wk
1,400mg/m3 - 8hr/dy-40hr/wk

IDLH: 10,000 ppm

Symptoms:

Eye, nasal, throat, and respiratory irritation; Belligerence; Boastfulness; Cold, painful skin; Coma; Convulsions; Corneal abnormalities; Death; Dermatitis; Dilated pupils; Double vision; Drowsiness; Emotional instability; Exhilaration; Flushed face; Gastritis; Headaches; Heart rate over 100 beats per minute; Hypoglycemia; Hypothermia; Impaired motor skills; Impaired or absent tendon reflexes; Incontinence; Incoordination; Low blood pressure; Lung, liver, kidney, and heart damage; Nausea; Partial or complete loss of sensation; Peripheral vascular collapse; Pneumonia; Profuse sweating; Rapid pulse; Remorse; Shock; Slowed reaction time; Slowed respiration; Slurred speech; Stupor; Talkativeness; Unconsciousness due to narcotic effects; Vertigo; Vomiting; Weakness.
Suspected of causing CNS depression and Death.

End-point Targets: Eyes, Skin, Respiratory System.

Known Neurotoxin

Classification: Polar volatile organic compounds.

Ethyl Acetate - Links

- HSDB - Ethyl Acetate - Enter Chemical Name

9. AMINE

Information forthcoming.

10. TOLUENE

TN/Synonyms: Methyl benzene, Methyl benzol, Phenyl methane, Toluol.

OSHA PEL: 100 ppm -8hr/dy-40hr/wk
375 mg/m3 - 8hr/dy-40hr/wk
150 ppm - exposure not to exceed
15 minutes
560 mg/m3 - exposure. not to exceed 15 minutes

ATSDR RL: 4 ppm - Inhalation less than 15 days
1 ppm - Inhalation less than 14 days

IDLH: 2,000 ppm

Symptoms:

Eye, skin, and respiratory irritation; Abdominal pain; Anemia; Birth defects; Central nervous system dysfunction and depression; Coma; Confusion; Death; Delerium; Dermatitis; Dilated pupils; Dizziness; Drowsiness; Dry skin; Emotional instability; Enlarged liver; Euphoria; Fatigue; Fetal anomalies and developmental delay; Fetal central nervous system dysfunction; Hallucinations; Headaches; Impaired reaction time, perception, and motor control; Incoordination; Insomnia; Liver disorders and injury; Mild to severe toxic brain dysfunction; Muscle fatigue; Nausea; Nervousness; Neurobehavioral changes; Numbness, tingling, or prickling sensation; Organic affective syndrome; Psychosis; Tearing; Vertigo; Vision disturbances; Vomiting; Weakness.
Suspected of causing Blurred vision, Involuntary eye movement, Tremors, Staggering gait, Abnormal electroencephalogram.

End-point Targets: Central Nervous System, Liver, Skin.

Classification: Organic solvent, Polar volatile organic compounds.

Note: Historically established as a Neurotoxin.

Toluene - Links

- Toluene
- Toluene
- HSDB - Toluene - Enter Chemical Name

11. DICHLOROMETHAN (METHYLENE CHLORIDE)

TN/ Synonyms: Dichloromethane, Methylene dichloride, Narkotil (tu), Salaesthin (tu).

NIOSH: Carcinogen at any exposure level. Reduce exposure to lowest possible level.

OSHA PEL: 500 ppm - 8hr/dy-40hr/wk

1,000 ppm - ceiling limit
2,000 ppm - 5 min max peak in any
two hours

ACGIH: Suspected human carcinogen

Dichloromethan - (Methylene Chloride) Links

- Dichloromethan - Methylene Chloride
- Dichloromethan
- HSDB - Dichloromethan - Enter Chemical Name

12. FREON

Synonym: Chloromethane
Freon - Chloromethane

- Freon-Chloromethane
- Freon-Chlormethane

13. SILICONE

View Links Below
Silicone Polymers

Methyl chloride was used to give a mixture of METHYLCHLOROSILANES...BAX104/121792/17/z-06351.002

DIMETHYLDICHLOROSILANE reacted with water which resulted in the formation of POLYDIMETHYLSILOXANE prepolymers.
BAX104/121792/17/Z-06351.002

METHYLVINYLSILOXANE--BAX104/121792/17/Z
-06351.002

POLYMETHYLVINYLSILOXANE and POLYMETHYLTHYDROGENSILOXANE are present in lesser amounts...BAX104/121792/17/Z-06351.002

Silicone - LInks

- HSDB - Silicone - Enter Chemical Name

14. FLUX (Sodium Flouride)

View links below
Flux (Sodium Flouride) - Links

- HSDB - Flux (Sodium Flouride) - Enter Chemical Name

15. Solder (lead-based solder)

View links below

Solder - (Lead-based) - Links

- HSDB - Solder (lead-based) - Enter Chemical Name

16. FORMALDEHYDE (LOFOL)

View Links Below

Formaldehyde - Links

- HSDB - Formaldehyde - Enter Chemical Name

17. TALCUM POWDER

View Links Below

Talcum Powder (Talc) - Links

- HSDB - Talcum Powder (Talc) - Enter Chemical Name

18. Oakite (Trisodium Phosphate)

View the links below

Oakite (Trisodium Phosphate) - Links

- HSDB - Oakite (Trisodium Phosphate) - Enter Chemical Name

19. EASTMAN 910 GLUE--(CYANOACRYLATES)

View Links Below

Eastman 910 Glue - LInks

- HSDB - Eastman 910 Glue - Enter Chemical Name

20. ETHYLENE OXIDE (ETO)

TN/Synonyms: Dimethylene oxide; 1,2-Epoxy ethane; Oxirane; Dihydro-oxirene; Epoxyethane; Ethene oxide; ETO; Anprolene (tn; Oxyfume (tn); T-Gas (tn).

NIOSH REL: <0.1 ppm - 10hr/dy-40hr/wk
0,18 mg/m3 - 10hr/dy-40hr/wk
5 ppm - ceiling limit
9 mg/m3 - 15 min/day

OSHA PEL: 1 ppm - 8hr/dy-40hr/wk
5 ppm - 15-min Excursion

ACGIH: Suspected Human Carcinogen

ATSDR MRL: 0.09 PPM - Inhalation more than
14 days
IDLH: 800 ppm

Symptoms:

Eye, nasal, and throat irritation; Bronchitis; Burns skin and eye; Cancer (leukemia, stomach, pancreatic); Cataracts; Chromosomal aberrations, Corneal burns, Cyanosis; Decreased sperm count; Diarrhea; Electrocardiogram abnormalities, Emphysema; Frostbite; Headaches; Hodgkin's Disease; Impaired hand/eye coordination; Labored or difficulty breathing; Memory loss; Nausea; Neuropathy; Numbness, tingling or prickling sensation; Peculiar taste; Peripheral neuropathy; Pulmonary edema; Spontaneous abortion; Vomiting.
Suspected of causing Nasal mucosa inflammation, Epithelial tissue death, Respiratory lesions, Low birth weight, Neonate lethality, Birth Defects, Testicular degeneration, Convulsions, Liver and kidney damage.

End-point Targets: Respiratory system, Central nervous system.

Cleansing/Sterilization Chemicals:

ETHYLENE OXIDE -- McGhan--

Ethylene oxide was used in the sterilization of the medical devices it made including breast prostheses.--MCG901/62993/04/818 The use of this chemical was called into question by a physician in California in a letter dated July 17, 1981, in which the doctor states that "ethylene oxide is very, very irritating to tissues and is impossible to thoroughly get out of implants, so that may be a major cause of constrictive fibrosis." --MCG901/62993/04/8416

Ethylene Oxide (ETO, epoxy ethane)-Links

- Ethylene Oxide
- HSDB - Ethylene Oxide - Enter Chemical Name

21. CARBOB BLACK

TN/Synonyms: Acetylene black Channel black, Furnace black, Lamp black, Thermal black.

NIOSH: Carcinogen at any exposure level.

OSHA PEL: 3.5 mg/m3 - 8hr/dy-40hr/wk

Symptoms: Unknown

Target organ(s): Unknown

Note: Present in Polycyclic aromatic hydrocarbons.

Carbob Black (Acetylene Black) - LInks

- HSDB - Acetylene Black - Enter Chemical Name

22. XYLENE

TN/Synonyms: Dimethylbenzene, Xyolol, Methyl toluene, Voilet 3 (tn).
Isomers:
m-Xylene - 1,3 Diethylbenezene; 1,3-Xylene,
m-Dimethylbenzene; m-Xyolo; m-Methyltoluene; meta-Xylene.
o-Xylene - 1,2-Dimethylbenezene; 1,2-Xylene; o-Dimethylbenzene; o-Xyolo; o-Methyltoluene; ortho-Xylene.
p-Xylene - 1,4-Dimethylbenezene; 1,4-Xylene; p-Dimethylbenzene; p-Xyolo; Methyltoluene; para-Zylene; Scintillar (tn)

OSHA PEL; 100 ppm 8hr/dy-40hr/wk
435 mg/m3 8hr/dy-40hr/wk
150 ppm - exposure not to exceed
15 minutes
655 mg/m3 - exposure not to
exceed 15 minutes

IDLH: 1,000 ppm

Symptoms:

Eye, nasal throat, and respiratory irritation; Abdominal pain; Abnormal electrocardiograms; Amnesia; Brain hemorrhage; Cardiac palpitations; Confusion; Corneal acuolization; Death; Dermatitis; Dizziness; Drowsiness; Epileptic convulsions; Excitement; Fatigue; Gastric discomfort; Headaches; Impaired ability to work with numbers, balance, pulmonary function, and reaction times; Labored breathing; Lightheadedness; Liver and kidney damage; Loss of appetite and patience; Nausea; Pulmonary congestion, hemorrhaging, edema, and damage; Reduced coordination; Respiratory failure; Short-term memory loss; Staggering gait; Tremors; Unconsciousness due to narcotic effects; Ventricular fibrillation; Vomiting. Suspected of causing Birth defects; Spontaneous abortions; Cerebral dysfunction; Blurred vision; Involuntary eye movement.

End-point Targets: Central Nervous System, Eyes, Blood, Skin, Gastrointestinal tract, Liver, and Kidneys.

Known Neurotoxin

Classification: Organic Solvent, Polar volatile organic compounds.

Note: Xylenes usually contain the three forms of xylenes and 6% to 15% ethylbenzene.
Xylene - Links

- Xylene
- Xylene
- HSDB - Xylene - Enter Chemical Name

23. HEXONE

TN/synonyms: Isobutyl methyl ketone, Methyl isobutyl ketone, 4-Methly 2-pentanone, MIBK.

OSHA PEL: 50 ppm - 8hr/dy-40hr/wk
205 mg/m3 - 8hr/dy-40hr/wk
75 ppm- exposure not to exceed
15 minutes
300 mg/m3 - exposure not to exceed
15 minutes

IDLH: 3,000 ppm

Symptoms: Eye, nasal, throat, and mucus membrane irritation; Headaches; Nausea; Vomiting; Loss of appetite; Diarrhea; Drowsiness; Dizziness; Loss of balance; Weakness; Stomach pain; Sore throat; Fatigue; Insomnia; Intestinal pain; Enlarged liver; Colitis; Unconsciousness due to narcotic effects; Coma; Dermatitis; Central nervous system depression; Lightheadedness; Incoordination; Somnolence; Heartburn; Central nervous system impairment.

End-point Targets: Respiratory system, Eyes, Skin, Central Nervous System.

Note: Occupational tolerance seems to develop during the work week but is lost over the weekend. Some adverse effects have been noted below OSHA PEL.

Classification: Organic solvent (Ketone compound)
Hexone - Links

- HSDB - Hexone - Enter Chemical Name

24. 2-HEXANONE

View Links Below
2-Hexanone - Links

- 2-Hexanone

- HSDB - 2-Hexanone - Enter Chemical Name

25. THIXON-OSN-2

Information forthcoming

26. ANTIOXIDANT (RUBBER)

Information forthcoming

27. STEARIC ACID

View LInks Below

Stearic Acid - Links

- HSDB - Stearic Acid - Enter Chemical Name

28. ZINC OXIDE

OSHA PEL: 5 mg/m3 - 8hr/dy - 40hr/wk
10 mg/m3 - exposure not to exceed
15 minutes.

IDLH: NE

Symptoms:

Sweet or metallic taste, Dry throat, Cough, Chills, Fever, Tight chest, Labored or difficult breathing, Reduced pulmonary function, Blurred vision, Muscle cramps and pain, Lower back pain, Nausea, Vomiting, Fatigue, Lassitude disturbances, Pneumonia, Increase in leukocytes in the blood, Liver dysfunction, Gastrointestinal inflammation, Yawning, Weakness, Body aches, Headaches.

End-point Targets: Respiratory system, Skin.

Note: In one report, symptoms didn't appear until after six months of occupational exposure.

Zinc Oxide - Links

- HSDB - Zinc Oxide - Enter Chemical Name

29. NAPTHA

TN/ Synonyms: Crude solvent coal tar naphtha, High solvent naphtha.

OSHA PEL 100 ppm 8hr/dy-40hr/wk
400 ppm 8hr/dt-40hr/wk

IDLH: 10,000 ppm

Symptoms:
Eye, nasal, throat, and skin irritation; Dermatitis; Lightheadedness; Headaches; Loss of appetite; Dizziness; Indigestion; Nausea; Insomnia.

End-point Targets: Respiratory system, Eyes, Skin.

Component: Cumene.

Classification: Organic solvent (Refined Petroleum)

Naptha - Links

- HSDB - Naptha - Enter Chemical Name

30. PHENOL

TN/Synonyms: Carbolic acid, hydroxybenzene, Monohydxy benzene, Phenyl alcohol, Phenyl hydroxine.

NIOSH REL: 5 ppm - 10dy/wk-40hr/wk
19 mg/m3 - 10dy/wk-40hr/wk
15.6 ppm - ceiling limit, 15-min exp.
60 g/m3 - ceiling limit, 15-min exp.

OSHA PEL: 5 ppm - 8hr/dy-40hr/wk
19 mg/m3 - 8hr/dy-40hr/wk

HSDB TOXS: Some individuals may be hypersensitive with lethality or serious effects at very low exposures.

IDLH: 250 ppm

Symptoms: Eye, nasal, and throat irritation; Abdominal pain; Cardiac arrhythmias and failure; Cardiovascular collapse; Chemical odor on breath; Chromosomal aberrations and damage; Cold sweats; Collapse; coma; confusion; Convulsions; Cyanosis; Dark pigmentation of the ligaments, cartilage, and fibrous tissue; Dark urine; Dermatitis; Fainting; Frothing at nose and mouth; Genetic mutations; Granules in red blood cells; Headaches; Hemoglobin oxidizes to ferric form; Hemolytic anemia, Hypothermia; Liver, kidney, and heart damage; Loss of appetite; Low blood pressure; Muscle aches, pain, and twitching; Nausea; Pallor; Profuse sweating; Pulmonary edema; Renal Spontaneous abortions; Tremors; Unconsciousness; Vomiting; Weak, irregular pulse; Weakness; Weight loss.

End-point Targets: Liver, Kidneys, Skin.

Note: Derivative of benzene.

Historically Established as a Neurotoxin

Phenol - Links

- Phenol (1989)
- HSDB - Phenol - Enter Chemical Name

31. BENZENE

TN/Synonyms: Benzole, Annulene, Benzeen, Phenyl hydride, Coal naphtha, Cyclobexatriene, Fenzen, Phene, Pyrobenzol, Pyrobenzole, Polystream (tu), Benzol 90

NIOSH; 0.1 ppm - 10hr/dy-40hr/wk
1.0 ppm - exposure limitted to 15-min.

OSHA PEL: 1.0 ppm - 8hr/dy-40hr/wk
5.0 ppm - exposure limited to 15-min.

ACGIH: Suspected Human Carcinogen

ATSDR MRL: .001 ppm - inhalation, < 15 days

IDLH: 3,000 ppm

Symptoms:

Eye, nasal, and respiratory system irritation; Eye, skin, DNA, immune system, and chromosomal damage; Abnormal decrease in white blood cells; Anemia; Antibody formation, Aplastic anemia; Asphyxia; Blood diseases; Blurred vision; Bone marrow depression; Bronchitis; Cancer (leukemia); Cardiac collapse; Central nervous system depression; Cerebral swelling; Congestive gastritis; Convulsions; Death; Decreased antibodies; leukocytes, erythocytes, and platelets; Decreased coordination; Delirium; Dermatitis; Dizziness; Drowsinesss; Effects brain catecholamines; Euphoria; Fatigue; Gastritis; Giddiness; Granular tracheitis; Headaches; Impaired judgement; Kidney congestion; Laryngitis; Lassitude; Leukocyte chromosomal aberrations; Lightheadedness; Loss of appetitie; Loss of balance; Menstrual pain and disorders; Nausea; Nervousness; Non-lymphocytic leukemia; Ovarian atrophy; Pallor; Paralysis; Premature births; Pulmonary hemorrhage; Pyloris strictures; Respiratory arrest; Ringing or tingling in the ear; Skin swelling; Spleen infarction; Spontaneous abortions; Staggering gait; Tight chest; Tremors; Unconsciousness; Underdevelopment of organs or body; Vertigo; Vomiting; Weakness.
Suspected of causing Birth Defects.

End-point Targets: Blood, Central Nervous System, Bone Marrow, Skin, Eyes, Respiratory system.

Historically Established as a Neurotoxin.

Classification: Organic Solvent

Note: Metabolites: Benzene oxide oxepin, Muconic acid, Phenyl mercapturic acid, Pre-phenyl mercapturic acid, Benzene oxide, Benzene glycol, Muconaldehyde, Benzoquinone, Hydroquinone, Phenol, Catechol, Trihydroxy benzene, Glucoronide Sulfate.

Benzene and Toluene as Carcinogens

- Carcinogenic Potential of Benzene and Toluene W...

Benzene - Links

- Benzene (1989)
- Benzene

- HSDB - Bezene - Enter Chemical Name

32. LACQUER THINNER

Information forthcoming.

33. EPOXY RESIN

Information forthcoming.

34. EPOXY HARDENER

Information forthcoming.

35. PRINTING INK

Information forthcoming.

36. Metal Cleaning Acid

Information forthcoming

37. COLOR PIGMENTS AS RELEASE AGENTS

Information forthcoming

Other Chemicals and Metals Used in the Manufacturing of Silicone Gel Implants

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PLATINUM AS A CATALYST

August 8, 1975--memo from Tom Powell to Bill Masuda
Note on document indicates "gel mammary shell"
Subject: Platinum Solution--expecting a new supply of platinum solution from General Electric.
(BAX104/121792/17/Z-06351,0020)

TRICHLOROETHANE

TRICHLOROETHANE--McGhan--
All products were cleaned with 1,1,1 Trichlorethane solvent, in accordance with ASTM Standard F703--
MCG 901/62993/06/4495

ADDITIONAL LINKS

- BENZENE
- METHYL ETHYL KETONE (MEK)
- Hazardous Chemical Database

- HSDB Basic Database Search
- METHYL ETHYL KETONE
- Methyl ethyl ketone
- Search the EMCI Chemical References Web Pages
- trisodium phosphate, tribasic
- Dow Corning Implant Information Booklet
- Medical Device Coatings
- ATSDR - HazDat Database
- Environment Writers/Chemical Crossroads-Database
- Nat'l Academy Press, Spacecraft Maximum Allowab...
- Nat'l Academy Press, Spacecraft Maximum Allowab...
- OSHA TOXIC CHEMICAL DATABASE
- The Cancer War Needs An Informed Public: Known ...
- Hazardous & Toxic Substances-Database
- Occupational Safety & Health Administration - O...
- OSHA Reading Room & Electronic FOIA Page
- OSHA Subject Index Page
- International Chemical Safety Cards (WHO/IPCS/I...
- International Chemical Safety Cards (WHO/IPCS/I...
- International Chemical Safety Cards (WHO/IPCS/I...
- Neuropathology Research at The Medical College ...

- polyvinyl chloride
- polyvinyl chloride - Britannica.com
- Search the EMCI Chemical References Web Pages
- Silicone Products
- ABCNEWS.com : FDA: Silicone Implants Danger
- About.com : http://www.britannica.com/bcom/eb/a...
- Polyvinyl Chloride
- Chemical Safety Information Oxford Univ Search Chem Database
- Encyclopedia.com - Results for polyvinyl chloride
- International Chemical Safety Cards-Ethyl Acetate
- International Chemical Safety Cards-Ethyl Carbamate-Urethane
- International Chemical Safety Cards-Ethelene Oxide-Oxirane
- International Chemical Safety Cards-Methyl Ethyl Ketone
- International Chemical Safety Cards-Methyl Chloride-Chloromethane-Freon
- International Chemical Safety Cards-Platinum Tetrachloride
- International Chemical Safety Cards-cyclohexanone
- International Chemical Safety Cards-Phenol
- International Chemical Safety Cards-Acetone
- International Chemical Safety Cards-Tin-Stannous Chloride
- International Chemical Safety Cards-Denatured Alcohol-Ethanol
- International Chemical Safety Cards-Toluene-Methylbenzene
- International Chemical Safety Cards-Formaldehyde-Methylal
- International Chemical Safety Cards-Benzene

- International Chemical Safety Cards-Lead (lead-based solder)

  - NIOSH Databases
  - NIOSH/1988 PEL PROJECT
  - POLYVINYL CHLORIDE. The Columbia Encyclopedia: ...
  - Safety data for polyvinyl chloride
  - Saran Wrap® The History of PVDC
  - Silicone Gel Breast Implants Home Page
  - Vinyl Invention - Waldo L. Semon - Inventor