

SAFETY DATA SHEETS

This SDS packet was issued with item:

070307991

N/A

MATERIAL SAFETY DATA SHEET

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

| | | | | |
|--------------------------|---|-----------|-----------|-----------|
| Product Name | LC61BK | LC65HY-BK | LC980BK | LC1100BK |
| Product Code | LK3365001 | LK3261001 | LK3373001 | LK3571001 |
| Product Name | LC1100HY-BK | LC38BK | LC67BK | LC990BK |
| Product Code | LK3515001 | LK3660001 | LK3668001 | LK3648001 |
| General Use | Inkjet printing | | | |
| Product Description | Water based ink cartridge for inkjet printing machine | | | |
| MSDS No. | BHK018 | | | |
| Manufacturer | BROTHER INDUSTRIES, LTD. 5-1, Hamada-cho, Minami-ku, Nagoya 457-0822, JAPAN Telephone Number for Information +81-52-824-3429 | | | |
| Importer in USA | BROTHER INTERNATIONAL CORPORATION 100 Somerset Corporate Boulevard, P.O.Box 6911, Bridgewater, NJ 08807-0911, USA Telephone Number for Information +1-800-284-4329 | | | |
| Importer in Canada | BROTHER INTERNATIONAL CORP. (Canada) LTD. 1 rue Hôtel de Ville, Dollard-des-Ormeaux, Québec, H9B 3H6, CANADA Telephone Number for Information +1-514-685-0600 | | | |
| Importer in Australia | BROTHER INTERNATIONAL (AUST.) PTY. LTD. ACN 001 393 835 7 Khartoum Road, North Ryde, N.S.W. 2113 08875-6714, AUSTRALIA Telephone Number for Information +61-2-9887-4344 | | | |
| Importer in Europe | BROTHER INTERNATIONAL EUROPE LTD. Brother house, 1 Tame Street, Guide Bridge, Audenshaw, Manchester M34 5JE, UK Telephone Number for Information +44-161-330-6531 | | | |

Please telephone to the above office during our business hours.

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

Ink in cartridge is black liquid with slight odor.
Keep out of reach of children.
Ink poses little or no immediate hazard if spilled.

POTENTIAL HEALTH EFFECTS

Inhalation : Not expected to be a route of exposure under normal use.
Eye : Ink may cause slight irritation.
Skin : Prolonged exposure to ink may cause irritation.
Ingestion : Ink may cause gastrointestinal or other adverse effects.

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CHRONIC EFFECTS / CARCINOGENICITY

Specific data are not available. Carbon black has been classified by the IARC as group 2B. Other ingredients of ink have not been classified as carcinogens according to IARC monographs, NTP, and OSHA regulated.

EU HAZARD LABEL

Ink is not classified according to EU-Directive 1999/45/EC.

3. COMPOSITION / INFORMATION ON INGREDIENTS

| CHEMICAL NAME | CAS# / EC# | % by weight | USA OSHA PEL | ACGIH TLV | EU Symbol / Risk Phrases |
|---------------|-----------------------|-------------|---|---|--------------------------|
| Carbon Black | 1333-86-4 / 215-609-9 | 1 - 5 | Limits for air contaminant TWA 3.5mg/m ³ | TWA 3.5mg/m ³ Not classifiable as a human carcinogen. | Not classified |
| Glycerol | 56-81-5 / 200-289-5 | 10 - 30 | (as mist) Total dust TWA 15mg/m ³ Respirable fraction TWA 5mg/m ³ | (as mist) Total dust TWA 10mg/m ³ | Not classified |
| Water | 7732-18-5 / 231-791-2 | 50 - 70 | Not established | Not established | Not classified |

4. FIRST AID MEASURES

INHALATION : Remove to fresh air area and get medical attention.
EYE : Flush immediately with running water for at least 15 minutes and get medical attention.
SKIN : Wash with water and soap.
INGESTION : Dilute with water and get medical attention.

5. FIRE FIGHTING MEASURES

FLAMMABLE PROPERTIES

Auto-ignition temperature : 453°C
 Flammability : LEL : Not available UEL : Not available
 Flash point : Does not flash (>93.3°C)
 (Tag closed cup & Cleveland opened cup)

EXTINGUISHING MEDIA

Suitable: Water, CO₂, Foam, Dry chemical.
 Not to be used : None

FIRE FIGHTING INSTRUCTIONS

Special exposure hazards : Refer to section 10.
 Special protect equipment for fire-fighters : Use self-contained breathing apparatus.

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6. ACCIDENTAL RELEASE MEASURES

| | |
|----------------------------|--|
| PERSONAL PRECAUTION : | In case of ink vapor formation use respirator. |
| ENVIRONMENTAL PRECAUTION : | Take care to minimize ink that reaches to a sewer. |
| METHODS FOR CLEANING UP : | Wipe up ink with absorbent towel. Wash with water to remove remaining traces of ink. |

7. HANDLING AND STORAGE

| | |
|------------|--|
| HANDLING : | Avoid skin contact with ink. Avoid eye contact with ink. |
| STORAGE : | Keep out of reach of children. Store in a cool, dark, and dry place. |

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

| | |
|--------------------------|---|
| EXPOSURE LIMIT VALUES : | Refer to section 2. |
| EXPOSURE CONTROLS | |
| Engineering controls : | Ventilation is not required under normal use. |
| Personal protection | |
| Respiratory protection : | Not required under normal use. |
| Hand protection : | Not required under normal use. |
| Eye protection : | Not required under normal use. |
| Skin protection : | Not required under normal use. |

9. PHYSICAL AND CHEMICAL PROPERTIES

| | |
|---|---|
| Appearance : | Black liquid |
| Auto-ignition temperature : | 453°C |
| Boiling point : | 103°C |
| Density : | 1.08g/ml |
| Flammability : | LEL : Not available UEL : Not available |
| Flash point : | Does not flash (>93.3°C) (Tag closed cup & Cleveland opened cup) |
| Freezing point : | -9°C |
| Odor : | Slight odor |
| Partition coefficient (n-octanol/water) : | Not available |
| pH : | 7 - 9 |
| Solubility in water : | Soluble |
| Vapor density (Air=1) : | Not available |
| Vapor pressure : | Not available |
| Viscosity : | 2 - 5 mPa·s |

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10. STABILITY AND REACTIVITY

| | |
|------------------------------------|---------------------------------|
| STABILITY : | Stable |
| CONDITIONS TO AVOID : | None |
| MATERIALS TO AVOID : | Strong oxidizing agents |
| HAZARDOUS DECOMPOSITION PRODUCTS : | Carbon monoxide, Carbon dioxide |
| HAZARDOUS POLYMERIZATION : | Does not occur |

11. TOXICOLOGICAL INFORMATION

| | |
|-----------------------|--|
| Acute oral toxicity : | LD ₅₀ of ink is greater than 2000mg/kg. |
| Eye irritation : | Ink is classified as a MINIMAL IRRITANT |
| Skin irritation : | Ink is classified as a NON IRRITANT. |

12. ECOLOGICAL INFORMATION

| | |
|---------------------------------|---------------|
| PERSISTENCE AND DEGRADABILITY : | Not available |
| BIOACCUMULATIVE POTENTIAL : | Not available |

13. DISPOSAL CONSIDERATIONS

Dispose in accordance with federal, state and local regulations.

14. TRANSPORT INFORMATION

| | |
|---|----------------|
| US DEPARTMENT OF TRANSPORTATION (DOT) : | Not applicable |
| MARITIME TRANSPORT IMDG : | Not applicable |
| AIR TRANSPORT ICAO/IATA : | Not applicable |

15. REGULATORY INFORMATION

US REGULATIONS

TSCA STATUS : All components in ink are listed on TSCA inventory.

EUROPEAN REGULATIONS

EU NOTIFICATION : All components in ink are listed in EINECS, ELINCS or NLP Inventory.

EU HAZARD LABEL : Ink is not classified according to EU-Directive 1999/45/EC.

16. OTHER INFORMATION

The information relates only to this specific ink cartridge. It may not be valid for this ink cartridge, if used in combination with any other materials or in any other process. And it is based on our best knowledge as of the date of preparation (revision).

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Key

| | |
|-----------|---|
| ACGIH TLV | TLV (Threshold Limit Value) under American Conference of Governmental Industrial Hygienists |
| DOT | Department Of Transportation (USA) |
| EINECS | European Inventory of Existing Commercial Chemical Substances (EU) |
| IARC | International Agency for Research on Cancer |
| IATA | International Air Transport Association |
| IMDG | International Maritime Dangerous Goods |
| NTP | National Toxicology Program (USA) |
| OSHA | Occupational Safety and Health Administration (USA) |
| OSHA HCS | Hazard Communication Standard issued by Occupational Safety and Health Administration (USA) |
| OSHA PEL | PEL (Permissible Exposure Limit) under Occupational Safety and Health Administration (USA) |
| TSCA | Toxic Substances Control Act (USA) |

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Product name (code) LC11BK (LK3636001, LK4689001), LC16BK (LK3518001, LK4709001), LC38BK (LK3660001, LK4195001), LC39BK (LK5404001), LC60BK (LK5728001), LC61BK (LK3365001, LK4296001, LK5794001), LC67BK (LK3668001, LK4221001), LC975BK (LK5669001), LC980BK (LK3373001, LK4047001), LC985BK (LK4620001, LK5400001), LC990BK (LK4460001), LC1100BK (LK3571001, LK3984001), LC65HYBK (LK3261001, LK4329001), LC67HYBK (LK3516001, LK4276001), LC990HYBK (LK3517001, LK4480001), LC1100HYBK (LK3515001, LK4020001)

1.2 Relevant identified uses of the substance or mixture and uses advised against

Relevant Identified Use(s) These products are black ink in a cartridge for Brother Industries, Ltd. inkjet multifunction devices and fax receivers. The cartridge should be used as supplied by Brother and for use in the products stated. Information provided on this SDS is only consistent with the use specified by Brother.

1.3 Details of the supplier of the safety data sheet

Manufacturer Brother Industries, Ltd.
15-1 Naeshiro-cho, Mizuho-ku, Nagoya 467-8561, Japan
Telephone (for information): +81-52-824-2735

Importer (USA) Brother International Corporation
200 Crossing Boulevard, Bridgewater, NJ 08807, USA
Telephone (for information): +1-877-276-8437

Importer (Canada) Brother International Corporation (Canada) Ltd.
1 Hotel de Ville, Dollard des Ormeaux, Quebec, H9B 3H6, Canada
Telephone (for information): +1-514-685-0600

Importer (Europe) Brother International Europe Ltd.
Brother House, 1 Tame Street, Guide Bridge, Audenshaw, Manchester M34 5JE, UK
Telephone (for information): +44-161-330-6531

Importer (Australia) Brother International (Aust.) Pty. Ltd. ACN 001 393 835
Level 3, Building A, 11 Talavera Road, Macquarie Park, NSW 2113, Australia
Telephone (for information): +61-2-9887-4344

E-mail Address sds.info@brother.co.jp

1.4 Emergency telephone number

Emergency Telephone (24 hours) CHEMTREC
+1-703-527-3887 (International)
+1-800-424-9300 (North America)
+61-290372994 (Australia)

For France only:
Antipoison Center telephone number: ORFILA +33-1-45-425-959

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008

Not classified as hazardous

Classification according to OSHA GHS

Not classified as hazardous

Australia Classification

Not classified as hazardous according to the criteria of NOHSC

2.2 Label elements

Labelling according to Regulation (EC) No. 1272/2008

Hazard pictograms

None

Signal Word

None

Hazard Statements

EUH208 - Contains 1,2-benzisothiazol-3(2H)-one. May produce an allergic reaction.

Precautionary statements

None

2.3 Other hazards

This product contains no substance considered to be persistent, bioaccumulating nor toxic (PBT). This product contains no substance considered to be very persistent nor very bioaccumulating (vPvB).

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Description of the mixture: Water based inkjet ink (Mixture).

| Chemical Name | CAS-No | EC-No | w/w% | Classification (67/548/EEC) | Classification (EU Reg. 1272/2008) |
|------------------------------|-----------|-----------|--------|--|---|
| Glycerol | 56-81-5 | 200-289-5 | 20-30 | Not classified | Not classified |
| Carbon Black | 1333-86-4 | 215-609-9 | 1-5 | Not classified | Not classified |
| Water | 7732-18-5 | 231-791-2 | 65-75 | Not classified | Not classified |
| 1,2-benzisothiazol-3(2H)-one | 2634-33-5 | 220-120-9 | < 0.05 | Xn; R22 Xi; R41 Xi; R38 R43 N; R50 | Acute Tox. 4 (Oral), H302 Skin Irrit. 2, H315 Eye Dam. 1, H318 Skin Sens. 1, H317 Aquatic Acute 1, H400 |

For the full text of R-phrases and H-Statements see Section 16

SECTION 4: First aid measures

4.1 Description of first aid measures

| | |
|----------------|--|
| General advice | If symptoms persist, obtain medical attention. |
| Inhalation | Obtain medical attention. In case of accident by inhalation remove casualty to fresh air and keep at rest. |
| Skin contact | Remove contaminated clothing immediately and wash affected skin with plenty of water or soap and water. |
| Eye contact | Obtain medical attention. If substance has got into the eyes, immediately wash out with plenty of water for at least 15 minutes. |
| Ingestion | Obtain immediate medical attention. Wash out mouth with water and give 100-200 ml of water to drink. |

4.2 Most important symptoms and effects, both acute and delayed

Skin contact: Repeated and/or prolonged skin contact may cause irritation.
Eye contact: May cause eye irritation.
Ingestion: Ingestion may cause irritation of the gastrointestinal tract. Unlikely route of exposure.
Inhalation: Unlikely route of exposure.

4.3 Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable Extinguishing Media Extinguish preferably with dry chemical, carbon dioxide, water spray, foam.

Unsuitable Extinguishing Media None.

5.2 Special hazards arising from the substance or mixture

Thermal decomposition of organic components may result in occurrence of oxides of carbon. Toxic gases may be formed upon combustion and represents a hazard to firefighters. Combustion products: See Section: 10.

5.3 Advice for firefighters

Use appropriate respirator for carbon monoxide and carbon dioxide. Wear positive pressure self-contained breathing apparatus (SCBA) during the attack phase of firefighting operations and during cleanup in enclosed or poorly ventilated areas immediately after a fire. Personnel not having suitable respiratory protection must leave the area to prevent significant exposure to toxic combustion gases from any source.

SECTION 6: Accidental release measures

| | |
|--|---|
| 6.1 Personal precautions, protective equipment and emergency procedures | Ensure adequate ventilation. Avoid contact with eyes. |
| 6.2 Environmental precautions | Prevent substance entering sewers. Washings must be prevented from entering surface water drains. |
| 6.3 Methods and materials for containment and cleaning up | Wipe up with absorbent towel Wash with water to remove remaining traces of ink |
| 6.4 Reference to other sections | For personal protection: See section 8. For disposal considerations: See section 13. |

SECTION 7: Handling and storage

| | |
|---|---|
| 7.1 Precautions for safe handling | Keep out of the reach of children. Avoid contact with skin and eyes. |
| 7.2 Conditions for safe storage, including any incompatibilities | Keep away from oxidizing agents. |
| 7.3 Specific end use(s) | These products are black ink in a cartridge for Brother Industries, Ltd. inkjet multifunction devices and fax receivers. This cartridge should be used as supplied by Brother and for use in the products stated. |

SECTION 8: Exposure controls/personal protection

8.1 Control Parameters

Occupational Exposure Limits

| Chemical Name | Glycerol 56-81-5 |
|--------------------|---|
| ACGIH TLV | TWA: 10 mg/m ³ mist |
| OSHA PEL | TWA: 15 mg/m ³ mist, total particulate TWA: 5 mg/m ³ mist, respirable fraction |
| European Union | - |
| The United Kingdom | STEL: 30 mg/m ³ TWA: 10 mg/m ³ |
| France | TWA: 10 mg/m ³ |
| Spain | TWA: 10 mg/m ³ |
| Germany | TWA: 50 mg/m ³ Ceiling / Peak: 100 mg/m ³ |
| Portugal | TWA: 10 mg/m ³ |
| Finland | TWA: 20 mg/m ³ |
| Switzerland | STEL: 100 mg/m ³ TWA: 50 mg/m ³ |
| Poland | TWA: 10 mg/m ³ |
| Ireland | TWA: 10 mg/m ³ |
| Chemical Name | Carbon Black 1333-86-4 |
| ACGIH TLV | TWA: 3 mg/m ³ inhalable fraction |
| OSHA PEL | TWA: 3.5 mg/m ³ |
| European Union | - |
| The United Kingdom | STEL: 7 mg/m ³ TWA: 3.5 mg/m ³ |
| France | TWA: 3.5 mg/m ³ |

| | |
|-----------------|---|
| Spain | TWA: 3.5 mg/m ³ |
| Germany | Carc |
| Portugal | TWA: 3.5 mg/m ³ |
| Finland | TWA: 3.5 mg/m ³ STEL: 7 mg/m ³ |
| Denmark | TWA: 3.5 mg/m ³ |
| Poland | TWA: 4.0 mg/m ³ |
| Norway | TWA: 3.5 mg/m ³ STEL: 7 mg/m ³ |
| Ireland | TWA: 3.5 mg/m ³ STEL: 7 mg/m ³ |

8.2 Exposure controls

Appropriate engineering controls Good general ventilation should be sufficient under normal use.

Personal protective equipment Not normally required. For use other than in normal operating procedures (such as in the event of large spill), the following should be applied:

| | |
|--------------------------|--|
| Eye Protection | Safety goggles. |
| Hand Protection | Protective gloves. |
| Skin and body protection | Long sleeved clothing and long pants. |
| Respiratory protection | Large spillages: Wear suitable respiratory protective equipment. |

Environmental Exposure Controls Avoid release to the environment.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

| | |
|--|--|
| Appearance | |
| Physical state | Liquid |
| Color | Black |
| Odor | Slight |
| Odor Threshold | No information available |
| pH | 7 - 9 |
| Melting point/freezing point | - / < -5 °C |
| Initial boiling point and boiling range | > 100 °C |
| Flash Point | Not less than 93.3°C (Tag closed cup; Cleveland open cup) |
| Evaporation rate | No information available |
| Flammability (solid, gas) | Not applicable |
| Upper/lower flammability or explosive limits | No information available |
| Vapor pressure | No information available |
| Vapor density | No information available |
| Relative density | 1.0 - 1.1 (H ₂ O=1) |
| Solubility(ies) | Soluble (water) |
| Partition coefficient: n-octanol/water | No information available |
| Auto-ignition temperature | >400 °C |
| Decomposition temperature | No information available |
| Viscosity | 1 - 5 mPa·s |
| Explosive properties | Not explosive |
| Oxidizing properties | No information available |

9.2 Other information

No information available.

SECTION 10: Stability and reactivity

| | |
|--|--|
| 10.1 Reactivity | No information available. |
| 10.2 Chemical stability | Stable. |
| 10.3 Possibility of hazardous reactions | No information available. |
| 10.4 Conditions to avoid | No information available. |
| 10.5 Incompatible materials | Strong oxidizing agents. |
| 10.6 Hazardous decomposition products | Contains: Carbon monoxide (CO). Carbon dioxide (CO ₂). |

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

| | |
|--------------|---|
| Inhalation | No information available. |
| Eye contact | No information available. |
| Skin contact | No information available. |
| Ingestion | LD ₅₀ > 2000 mg/kg (Method OECD#420) |

Skin corrosion/irritation Non-irritant. (Method: OECD#404)

Serious eye damage/irritation Minimal irritant to the eye. (Method: OECD#405)

Respiratory or skin sensitisation It is not a skin sensitizer. (Method: OECD#429)

Mutagenicity Negative. (Method: OECD#471)

Carcinogenicity Carbon Black: In 1996, the IARC re-evaluated carbon black as a Group 2B carcinogen (possible human carcinogen). This classification is given to chemicals, for which there is inadequate human evidence, but sufficient animal evidence on which to base an opinion of carcinogenicity. The classification is based upon the development of lung tumors in rats receiving chronic inhalation exposures to free carbon black at levels that induce particle overload of the lung. Studies performed in animal models other than rats did not show any association between carbon black and lung tumors.

Other ingredients of this product have not been classified as carcinogens according to IARC monographs, NTP and OSHA.

SECTION 12: Ecological information

12.1 Toxicity

| Chemical Name | Toxicity to algae | Toxicity to fish | Toxicity to daphnia and other aquatic invertebrates |
|---------------------------|-------------------|---|--|
| Glycerol 56-81-5 | | LC ₅₀ : 51 - 57 mL/L 96 h static (<i>Oncorhynchus mykiss</i>) | EC ₅₀ : >500 mg/L 24 h (<i>Daphnia magna</i>) |
| Carbon Black 1333-86-4 | | | EC ₅₀ : >5600 mg/L 24 h (<i>Daphnia magna</i>) |

12.2 Persistence and degradability No information available.

12.3 Bioaccumulative potential

| Chemical Name | log Pow |
|---------------|---------|
| Glycerol | -1.76 |

12.4 Mobility in soil No information available.

12.5 Results of PBT and vPvB assessment This product contains no substance considered to be persistent, bioaccumulating nor toxic (PBT). This product contains no substance considered to be very persistent nor very bioaccumulating (vPvB).

12.6 Other adverse effects No information available.

SECTION 13: Disposal considerations

13.1 Waste treatment methods Dispose of in accordance with Federal, State, and local regulations.

SECTION 14: Transport information

Not classified according to the United Nations "Recommendations on the Transport of Dangerous Goods"

14.1 UN Number None

14.2 UN proper shipping name None

14.3 Transport hazard class(es) None

14.4 Packing Group None

14.5 Environmental hazards None

14.6 Special precautions for user None

14.7 Transport in bulk according to Annex II of Marpol 73/78 and the IBC Code Not applicable

Not regulated under DOT, IMDG, IATA.

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

EU:Not classified as dangerous for supply/use. (1999/45/EC)

USA: All chemical substances contained in this product are and had been listed on the TSCA Chemical Substances Inventory, and none is subject to any of the following TSCA requirements: section 4 test rules; proposed or final section 5(a)(2) significant new use rules; section 5(e) consent orders; section 8(a) preliminary assessment information rules; and section 8(d) health and safety data reporting rules.

Canada: WHMIS: Not applicable. (Manufactured article)

15.2 Chemical Safety Assessment

No.

SECTION 16: Other information

Full text of R-phrases referred to under sections 2 and 3

R22 - Harmful if swallowed
R41 - Risk of serious damage to eyes
R38 - Irritating to skin
R43 - May cause sensitization by skin contact
R50 - Very toxic to aquatic organisms

Full text of H-Statements referred to under sections 2 and 3

H302 - Harmful if swallowed
H315 - Causes skin irritation
H318 - Causes serious eye damage
H317 - May cause an allergic skin reaction
H400 - Very toxic to aquatic life

Additional information

The information relates only to this product. It may not be valid, if used in combination with any other materials or in any other process, and it is based on our best knowledge as of the date of preparation (revision).

Revision Note

SECTION 1, 2.

References:

U.S. 29CFR Part 1910
ACGIH Threshold Limit Values for Chemical Substances and Physical Agents and Biological Exposure Indices
IARC Monographs on the Evaluation of the Carcinogenic Risks to Humans World Health Organization
EU Directive 91/322/EEC and 2000/39/EC
NTP 11th Report on Carcinogens

Abbreviations:

ACGIH: American Conference of Governmental Industrial Hygienists
DOT: Department Of Transportation (US)
IARC: International Agency for Research on Cancer
IATA: International Air Transport Association
IMDG: International Maritime Dangerous Goods
NOHSC: National Occupational Health and Safety Commission (Australia)
NTP: National Toxicology Program (US)
OSHA: Occupational Safety and Health Administration (US)
PEL: Permissible Exposure Limit
STEL: Short Term Exposure Limit
TLV: Threshold Limit Value (ACGIH)
TSCA: Toxic Substances Control Act (US)
TWA: Time Weighted Average
WHMIS: Workplace Hazardous Material Information System (Canada)