SAFETY DATA SHEETS

This SDS packet was issued with item:

072039592

The safety data sheets (SDS) in this packet apply to one or more components included in the items listed below. Items listed below may require one or more SDS. Please refer to invoice for specific item number(s).

072039238 072039568 072039576 072039584 072039600 072039618 072039626 072039634 072039816 072039824 072039832 072039840 072039857 072039865 072039873 072039881 072039899 072039907



MS439111

GC FUJI IX GP - POWDER MATERIAL SAFETY DATA SHEET

Page 1 of 2

SECTION 1 - SOURCE/IDENTITY/USE INFORMATION

DISTRIBUTOR

GC AMERICA INC. 3737 West 127th St. Alsip, Illinois, 60803 Telephone: 708-597-0900

Hours: Mon.- Fri. 8:00 am. - 5:00 pm. C.S.T.

Transportation Emergency Telephone No. 800-424-9300

COMMON NAME: GC FUJI IX GP – POWDER

GC FUJI XI GP CAPSULE – POWDER GC FUJI XI GP FAST SET – POWDER GC FUJI IX GP EXTRA - POWDER

CHEMICAL NAME: N.A.

PRODUCT USE: Glass ionomer for Restorative Treatment - powder component

The following information is provided with regard to the toxicity and hazards of the pure components present in this product.

SECTION 2 - HAZARDOUS INGREDIENTS/IDENTITY INFORMATION

| COMPONENT | C.A.S. | EXPOSURE LIMITS | LD50/LC50 | % |
|------------------------------|------------|-------------------------|-------------------|--------|
| Fluoro Aluminosilicate glass | Not listed | TLV=10mg/m ³ | N.E. | 90-100 |
| (amorphous) | | PEL=15mg/m³ | | |
| • | | (ACGIH) | | |
| Polyacrylic acid | Not listed | TWA=10ppm | LD50 = 2500 mg/kg | 5-10 |
| | | (ACGIH) | (oral rat) | |
| | | | LC50 = N.E. | |

SECTION 3 - PHYSICAL/CHEMICAL PROPERTIES

COEFFICIENT OF OIL/WATER DISTRIBUTION: N.E. APPEARANCE AND ODOR: Very fine white powder

SECTION 4 - FIRE AND EXPLOSION DATA

FLASH POINT: Not flammable FLAMMABLE LIMITS: N.A.

EXTINGUISHING MEDIA: Alcohol foam

SPECIAL FIRE FIGHTING PROCEDURES: Full protective clothing and self-contained breathing apparatus.

UNUSUAL FIRE AND EXPLOSION HAZARDS: None HAZARDOUS COMBUSTION PRODUCTS: N.E.

SECTION 5 - REACTIVITY DATA

STABILITY: Stable Unstable Deliver Will Not Occur Will Occur

CONDITIONS TO AVOID: High heat

INCOMPATIBILITY (Materials to Avoid): Alkali can inactivate product

HAZARDOUS DECOMPOSITION OR BY-PRODUCTS: No decomposition if used or stored according to specifications.



MS439111 GC FUJI IX GP - POWDER

Page 2 of 2

SECTION 6 - HEALTH HAZARD DATA and FIRST AID INFORMATION

| | YES | NO | NE | NA | NTP | IARC | OSHA | OTHER |
|---------------------|-----|----|----|----|-----|------|------|-------|
| MUTAGENIC AFFECTS | | X | | | | | | |
| TERATOGENIC AFFECTS | | X | | | | | | |
| REPRODUCTIVE TOXIN | | X | | | | | | |
| CARCINOGENICITY | | X | | | | | | |
| SENSITIZER | | X | | | | | | |

ROUTES OF ENTRY: Inhalation $oxed{\boxtimes}$ Skin $oxed{\boxtimes}$ Ingestion $oxed{\boxtimes}$

HEALTH HAZARD (Acute and Chronic): Dusts of silica glass is also a known cause of silicosis, a non-cancerous lung disease. **SIGNS AND SYMPTOMS OF OVEREXPOSURE:** Irritation and soreness in throat and nose.

CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE: May aggravate pre-existing upper respiratory and lung disease.

EMERGENCY FIRST AID PROCEDURES:

INGESTION: Do not induce vomiting - give large volumes of water. Seek medical attention.

SKIN: Wash with soap and water. If irritation develops seek medical attention.

EYES: Flush with water for 15 minutes. If irritation develops seek medical attention.

INHALATION: Remove to fresh air, drink water to clear throat and blow nose to evacuate dust.

SECTION 7 - PRECAUTIONS FOR SAFE HANDLING AND USE

IN CASE OF RELEASE OR SPILL: Avoid generating dusts during cleanup. If an excessive amount of dust is generated use a filter equipped vacuum and MSHA/NIOSH approved mask.

WASTE DISPOSAL METHOD: In accordance with local, state, and federal regulations.

STORAGE, HANDLING, AND SPECIAL PRECAUTIONS: Store at normal room temperatures and humidity.

SECTION 8 - CONTROL MEASURES

RESPIRATORY PROTECTION: Minimize exposure to dust in accordance with good hygiene practices. If needed, use MSHA-NIOSH approved respirator.

 $\begin{tabular}{lll} \textbf{VENTILATION:} & \textbf{Local Exhaust:} & N.A. & \textbf{Mechanical:} & \textbf{YES} & \textbf{Special:} & N.A. & \textbf{Other:} & N.A. \\ \end{tabular}$

PROTECTIVE GLOVES: Latex gloves are recommended

EYE PROTECTION: Goggles or full face shield

OTHER PROTECTIVE CLOTHING OR EQUIPMENT: Do not spill on clothing. Eyewash station

WORK/HYGIENIC PRACTICE: Follow safe hygiene practices.

SECTION 9 - PREPARATION INFORMATION

This data is supplied to comply with OSHA Hazard Communication Standard 29 CFR 1910,1200 and W.H.M.I.S. CPR

DATE: 13 December 2006 **REVISED:** 12 March 2012

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N.A. = NOT APPLICABLE N.E. = NOT ESTABLISHED

The information herein is given in good faith but no warranty expressed or implied is made.

NFPA

REACTIVITY – 0

SPECIAL -

FIRE – 0 TOXICITY – 1



MS439191

GC FUJI IX GP - LIQUID MATERIAL SAFETY DATA SHEET

Page 1 of 2

SECTION 1 - SOURCE/IDENTITY/USE INFORMATION

DISTRIBUTOR

GC AMERICA INC. 3737 West 127th St. Alsip, Illinois, 60803 Telephone: 708-597-0900

Hours: Mon.- Fri. 8:00 am. - 5:00 pm. C.S.T.

Transportation Emergency Telephone No. 800-424-9300

COMMON NAME: GC FUJI IX GP - LIQUID

GC FUJI IX GP CAPSULES - LIQUID

GC FUJI IX GP FAST SET GC FUJI IX GP EXTRA

CHEMICAL NAME: N.A.

PRODUCT USE: Glass ionomer for Restorative Treatment - liquid component

The following information is provided with regard to the toxicity and hazards of the pure components present in this product.

SECTION 2 - HAZARDOUS INGREDIENTS/IDENTITY INFORMATION

| COMPONENT | C.A.S. | EXPOSURE LIMITS | LD50/LC50 | % |
|------------------------|------------|-------------------------|------------------|-------|
| Polyacrylic acid | Not listed | TWA=10ppm | D50 = 2500 mg/kg | 30-40 |
| | | (ACGIH) | (oral rat) | |
| | | | LC50=N.E. | |
| Proprietary Ingredient | | TLV=10mg/m ³ | N.E. | 5-15 |
| | | PEL=15mg/m ³ | | |

SECTION 3 - PHYSICAL/CHEMICAL PROPERTIES

COEFFICIENT OF OIL/WATER DISTRIBUTION: N.E.

APPEARANCE AND ODOR: Colorless, slightly viscous and odorless liquid

SECTION 4 - FIRE AND EXPLOSION DATA

FLASH POINT: Not flammable FLAMMABLE LIMITS: N.A.

EXTINGUISHING MEDIA: Alcohol foam

SPECIAL FIRE FIGHTING PROCEDURES: Full protective clothing and self-contained breathing apparatus.

UNUSUAL FIRE AND EXPLOSION HAZARDS: None

HAZARDOUS COMBUSTION PRODUCTS: Emits acrid smoke when heated beyond boiling point.

SECTION 5 - REACTIVITY DATA

STABILITY: Stable Unstable Deliver Will Not Occur Will Will Occur

CONDITIONS TO AVOID: High heat

INCOMPATIBILITY (Materials to Avoid): Alkali will inactivate product

HAZARDOUS DECOMPOSITION OR BY-PRODUCTS: N.E.



MS439191

GC FUJI IX GP - LIQUID

Page 2 of 2

SECTION 6 - HEALTH HAZARD DATA and FIRST AID INFORMATION

| | YES | NO | NE | NA | NTP | IARC | OSHA | OTHER |
|---------------------|-----|----|----|----|-----|------|------|-------|
| MUTAGENIC AFFECTS | | X | | | | | | |
| TERATOGENIC AFFECTS | | X | | | | | | |
| REPRODUCTIVE TOXIN | | X | | | | | | |
| CARCINOGENICITY | | X | | | | | | |
| SENSITIZER | | X | | | | | | |

ROUTES OF ENTRY: Inhalation Skin Ingestion

HEALTH HAZARD (Acute and Chronic): Acidic solution (pH=1.90), care should be taken to avoid contact with skin or eyes.

SIGNS AND SYMPTOMS OF OVEREXPOSURE: N.E.

CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE: N.E.

EMERGENCY FIRST AID PROCEDURES:

INGESTION: Do not induce vomiting - give large volumes of water. Seek medical attention.

SKIN: Wash with soap and water. If irritation develops seek medical attention. **EYES:** Flush with water for 15 minutes. If irritation develops seek medical attention.

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SECTION 7 - PRECAUTIONS FOR SAFE HANDLING AND USE

IN CASE OF RELEASE OR SPILL: Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust). Ensure adequate ventilation.

WASTE DISPOSAL METHOD: Dispose of in accordance with local, state and federal regulations.

STORAGE, HANDLING, AND SPECIAL PRECAUTIONS: Store in a cool dry place in tightly closed container.

SECTION 8 - CONTROL MEASURES

RESPIRATORY PROTECTION: None required

VENTILATION: Local Exhaust: N.A. Mechanical: N.A. Special: N.E. Other: N.A.

PROTECTIVE GLOVES: Latex gloves are recommended

EYE PROTECTION: Goggles or full face shield

OTHER PROTECTIVE CLOTHING OR EQUIPMENT: Do not spill on clothing. Eyewash station.

WORK/HYGIENIC PRACTICE: N.E.

SECTION 9 - PREPARATION INFORMATION

This data is supplied to comply with OSHA Hazard Communication Standard 29 CFR 1910,1200 and W.H.M.I.S. CPR

DATE: 13 December 2006 **REVISED:** 23 September 2009 **REVIEWED:** 13 March 2012

N.A. = NOT APPLICABLE N.E. = NOT ESTABLISHED

The information herein is given in good faith but no warranty expressed or implied is made.

NFPA

FIRE – 0 TOXICITY – 1 REACTIVITY – 0 SPECIAL – ACID



Printing date 02/24/2015

Version US-EN-Rev 1

Reviewed on 02/24/2015

1 Identification

- · Product identifier
- · Trade name: GC Fuji IX GP FAST (Powder, Shades: A1, A2, A3, A3.5, B2, and B3)
- Relevant identified uses of the substance or mixture and uses advised against

Dental material

The product is intended for professional use.

To avoid risks for humans and environment obtain instructions.

- · Application of the substance / the mixture Dental filling material
- · Details of the supplier of the safety data sheet
- · Manufacturer/Supplier:

GC America Inc. 3737 W. 127th Street Alsip, IL 60803 **USA**

sds@gcamerica.com

- · Information department: Regulatory Affairs
- · Emergency telephone number:

During normal opening times (Mon.-Fri. 8:00 AM-5:00 PM CST): +1 (708) 597-0900 Transportation (CHEMTREC®) Emergency Telephone No. +1 (800) 424-9300

2 Hazard(s) identification

· Classification of the substance or mixture

The product is not classified according to the Globally Harmonized System (GHS).

· Additional information:

The information provided is in regards to the toxicity and hazard rating(s) of the individual component(s) in the formulation. The associated risk(s) depends on the route(s) of exposure. The hazard rating system is based entirely on the existence of the risk(s) and does not take into account the likelihood of reduced risk(s) through proper usage and handling.

- · Label elements
- GHS label elements Void
- · Hazard pictograms Void
- · Signal word Void
- · Hazard statements Void
- · Classification system:
- · NFPA ratings (scale 0 4)



Health = 0Fire = 0Reactivity = 0

HMIS-ratings (scale 0 - 4)



Health = 0Fire = 0

(Contd. on page 2)

Printing date 02/24/2015 Version US-EN-Rev 1 Reviewed on 02/24/2015

Trade name: GC Fuji IX GP FAST (Powder, Shades: A1, A2, A3, A3.5, B2, and B3)

(Contd. of page 1)

- · Other hazards
- · Results of PBT and vPvB assessment
- PBT: Not applicable.vPvB: Not applicable.

3 Composition/information on ingredients

- · Chemical characterization: Mixtures
- **Description:** Mixture of the substances listed below with nonhazardous additions.
- · Dangerous components: Void
- · Additional information:

If a substance is marked with **, then substance is a trade secret. This is allowed under OSHA's Hazard Communication Standard (HCS) as a trade secret and under GHS as Confidential Business Information (CBI).

4 First-aid measures

- Description of first aid measures
- · General information:

No special measures required.

If symptoms persist consult doctor.

After inhalation:

Supply fresh air; consult doctor in case of complaints.

In case of unconsciousness place patient stably in side position for transportation.

· After skin contact:

Generally the product does not irritate the skin.

Rinse with warm water.

If symptoms persist consult doctor.

After eye contact:

Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.

After swallowing:

Rinse out mouth and then drink plenty of water.

If symptoms persist consult doctor.

- Information for doctor:
- · Most important symptoms and effects, both acute and delayed

No further relevant information available.

· Indication of any immediate medical attention and special treatment needed

No further relevant information available.

5 Fire-fighting measures

- · Extinguishing media
- Suitable extinguishing agents:

CO2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam. Use fire fighting measures that suit the environment.

- · For safety reasons unsuitable extinguishing agents: Water with full jet
- Special hazards arising from the substance or mixture

Formation of toxic gases is possible during heating or in case of fire.

(Contd. on page 3)

USA

Printing date 02/24/2015 Version US-EN-Rev 1 Reviewed on 02/24/2015

Trade name: GC Fuji IX GP FAST (Powder, Shades: A1, A2, A3, A3.5, B2, and B3)

(Contd. of page 2)

- · Advice for firefighters
- · Protective equipment: Wear self-contained respiratory protective device.
- **Additional information**

Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.

6 Accidental release measures

· Personal precautions, protective equipment and emergency procedures

Remove persons from danger area.

· Environmental precautions:

Do not allow product to reach sewage system or any water course.

Do not allow to penetrate the ground/soil.

Methods and material for containment and cleaning up:

Pick up mechanically.

Dispose of the collected material according to regulations.

Reference to other sections

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

7 Handling and storage

- · Handling:
- · Precautions for safe handling

Observe instructions for use.

Prevent formation of dust.

Any deposit of dust which cannot be avoided must be regularly removed.

Information about protection against explosions and fires:

Dust can combine with air to form an explosive mixture.

- · Storage:
- Requirements to be met by storerooms and receptacles:

Store only in unopened original receptacles.

- · Information about storage in one common storage facility: Store away from foodstuffs.
- Further information about storage conditions: Observe instructions for use / storage.
- · Specific end use(s) No further relevant information available.

8 Exposure controls/personal protection

- · Additional information about design of technical systems: No further data; see item 7.
- · Control parameters
- · Components with limit values that require monitoring at the workplace:

The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

- · Additional information: The lists that were valid during the creation were used as basis.
- · Exposure controls
- · Personal protective equipment:
- · General protective and hygienic measures:

The usual precautionary measures for handling chemicals should be followed.

Do not inhale dust / smoke / mist.

(Contd. on page 4)

Printing date 02/24/2015 Version US-EN-Rev 1 Reviewed on 02/24/2015

Trade name: GC Fuji IX GP FAST (Powder, Shades: A1, A2, A3, A3.5, B2, and B3)

(Contd. of page 3)

Wash hands before breaks and at the end of work.

- · Breathing equipment: Suitable respiratory protective device recommended.
- · Protection of hands: Protective gloves
- · Material of gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

Penetration time of glove material

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

Eye protection: Safety glasses

| Information on basic physical and General Information | chemical properties |
|---|---|
| Appearance: | |
| Form: | Powder |
| Color: | According to product specification |
| Odor: | Odorless |
| Odor threshold: | Not determined. |
| pH-value: | Not applicable. |
| Change in condition | |
| Melting point/Melting range: | Undetermined. |
| Boiling point/Boiling range: | Undetermined. |
| Flash point: | Not applicable. |
| Flammability (solid, gaseous): | Not determined. |
| Ignition temperature: | Undetermined. |
| Decomposition temperature: | Not determined. |
| Auto igniting: | Product is not selfigniting. |
| Danger of explosion: | Product does not present an explosion hazard. |
| Explosion limits: | |
| Lower: | Not determined. |
| Upper: | Not determined. |
| Vapor pressure: | Not applicable. |
| Density: | Not determined. |
| Relative density | Not determined. |
| Vapour density | Not applicable. |
| Evaporation rate | Not applicable. |
| Solubility in / Miscibility with | |
| Water: | Insoluble. |

(Contd. on page 5)

Printing date 02/24/2015 Version US-EN-Rev 1 Reviewed on 02/24/2015

Trade name: GC Fuji IX GP FAST (Powder, Shades: A1, A2, A3, A3.5, B2, and B3)

| | | (Contd. of page 4 |
|-------------------|--|-------------------|
| Viscosity: | | |
| Dynamic: | Not applicable. | |
| Kinematic: | Not applicable. | |
| Solvent content: | | |
| Organic solvents: | 0.0 % | |
| Solids content: | 100.0 % | |
| Other information | No further relevant information available. | |

10 Stability and reactivity

- · Reactivity No further relevant information available.
- · Chemical stability Stable at ambient temperature.
- · Thermal decomposition / conditions to be avoided:

No decomposition if used according to specifications.

- · Possibility of hazardous reactions No dangerous reactions known.
- · Conditions to avoid No further relevant information available.
- · Incompatible materials: No further relevant information available.
- · Hazardous decomposition products: No dangerous decomposition products known.

11 Toxicological information

- Information on toxicological effects
- · Acute toxicity:
- · LD/LC50 values that are relevant for classification: No further relevant information available.
- · Primary irritant effect:
- · on the skin: No irritant effect.
- · on the eye: No irritating effect.
- · Sensitization: No sensitizing effects known.
- Additional toxicological information:

The product is not subject to classification according to internally approved calculation methods for preparations:

· Carcinogenic categories

| · IARC (International Agency for Research on Cancer) | |
|---|---|
| poly(acrylic acid) | 3 |
| · NTP (National Toxicology Program) | |
| None of the ingredients is listed. | |
| · OSHA-Ca (Occupational Safety & Health Administration) | |
| None of the ingredients is listed. | |
| O and a second a section and colling and a | |

· Carcinogenic categories' legend:

(Contd. on page 6)

USA

Printing date 02/24/2015 Version US-EN-Rev 1 Reviewed on 02/24/2015

Trade name: GC Fuji IX GP FAST (Powder, Shades: A1, A2, A3, A3.5, B2, and B3)

(Contd. of page 5)

IARC Group 1: The agent is carcinogenic to humans.

IARC Group 2A: The agent is probably carcinogenic to humans.

IARC Group 2B: The agent is possibly carcinogenic to humans.

IARC Group 3: The agent is not classifiable as to its carcinogenicity to humans.

IARC Group 4: The agent is probably not carcinogenic to humans.

NTP K: Known to be human carcinogen.

NTP R: Reasonably anticipated to be human carcinogen.

12 Ecological information

- · Toxicity
- · Aquatic toxicity: No further relevant information available.
- Persistence and degradability No further relevant information available.
- · Behavior in environmental systems:
- · Bioaccumulative potential No further relevant information available.
- · Mobility in soil No further relevant information available.
- · Additional ecological information:
- · General notes:

Water hazard class 1 (Self-assessment): slightly hazardous for water

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

- · Results of PBT and vPvB assessment
- · **PBT:** Not applicable.
- vPvB: Not applicable.
- Other adverse effects No further relevant information available.

13 Disposal considerations

- · Waste treatment methods
- Recommendation: Smaller quantities can be disposed of with household waste.
- · Uncleaned packagings:
- · **Recommendation:** Disposal must be made according to official regulations.

| · UN-Number | | |
|----------------------------|------|--|
| DOT, ADR, ADN, IMDG, IATA | Void | |
| · UN proper shipping name | | |
| DOT, ADR, ADN, IMDG, IATA | Void | |
| Transport hazard class(es) | | |
| DOT, ADR, ADN, IMDG, IATA | | |
| Class | Void | |
| · Packing group | | |
| · DOT, ADR, IMDG, IATA | Void | |

– USA

Printing date 02/24/2015 Version US-EN-Rev 1 Reviewed on 02/24/2015

Trade name: GC Fuji IX GP FAST (Powder, Shades: A1, A2, A3, A3.5, B2, and B3)

(Contd. of page 6)

· Environmental hazards:

· Marine pollutant: No

· Special precautions for user Not applicable.

· Transport in bulk according to Annex II of

MARPOL73/78 and the IBC Code Not applicable.

· UN "Model Regulation":

15 Regulatory information

- · Safety, health and environmental regulations/legislation specific for the substance or mixture
- SARA (Superfund Amendments and Reauthorization Act)
- · Section 355 (extremely hazardous substances):

None of the ingredient is listed.

Section 313 (Specific toxic chemical listings):

None of the ingredients is listed.

· TSCA (Toxic Substances Control Act):

glass, oxide, chemicals

poly(acrylic acid)

- · Carcinogenic categories
- EPA (Environmental Protection Agency)

None of the ingredients is listed.

TLV (Threshold Limit Value established by ACGIH)

None of the ingredients is listed.

NIOSH-Ca (National Institute for Occupational Safety and Health)

None of the ingredients is listed.

- · GHS label elements Void
- · Hazard pictograms Void
- · Signal word Void
- · Hazard statements Void
- · Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16 Other information

- · Department issuing MSDS: Regulatory Affairs
- · Contact:

Regulatory Affairs

Telephone No. +1 (708) 597-0900

sds@gcamerica.com

- · Date of preparation / last revision 02/24/2015 / -
- · Abbreviations and acronyms:

GHS: Globally Harmonized System of Classification and Labelling of Chemicals

HCS: Hazard Communication Standard (USA)

MSDS: Material Safety Data Sheet

SDS: Safety Data Sheet

(Contd. on page 8)

Printing date 02/24/2015 Version US-EN-Rev 1 Reviewed on 02/24/2015

Trade name: GC Fuji IX GP FAST (Powder, Shades: A1, A2, A3, A3.5, B2, and B3)

(Contd. of page 7)

ADN: Accord européen relatif au transport international des marchandises dangereuses par voies de navigation intérieures (European Agreement Concerning the International Carriage of Dangerous Goods by Inland Waterways)

ECHA: European Chemicals Agency

OSHA: Occupational Safety and Health Administration (USA)

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the

International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

ACGIH: American Conference of Governmental Industrial Hygienists

CAS: Chemical Abstracts Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic vPvB: very Persistent and very Bioaccumulative

Sources

- Manufacturers' MSDSs/SDSs
- OSHA (https://www.osha.gov/dts/chemicalsampling/toc/chmcas.html)
- TOXNET (http://toxnet.nlm.nih.gov/)
- ECHA (http://echa.europa.eu/)
- EnviChem (www.echemportal.org)

· Notes:

CAS Registry Number is a Registered Trademark of the American Chemical Society. CHEMTREC® is a registered service mark of the American Chemistry Council, Inc.

* Data compared to the previous version altered. This version replaces all previous versions.

· Disclaimer:

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