

SAFETY DATA SHEETS

This SDS packet was issued with item:

072038628

The safety data sheets (SDS) in this packet apply to the individual products listed below. Please refer to invoice for specific item number(s).

072038610 072038636 072038644 072038651 072038669 072038677 072038719 072038727 072038735 072038743
072038750 072038768 072038776

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).

072038602



MS329359

ALIKE POWDER
MATERIAL SAFETY DATA SHEET

Page 1 of 2

SECTION 1 - SOURCE/IDENTITY/USE INFORMATION**MANUFACTURER**

GC AMERICA INC.

3737 West 127th St.

Alsip, Illinois, 60803

Telephone: 708-597-0900

Hours Mon.-Fri: 8:00 a.m.-5:00 p.m. C.S.T.

Transportation Emergency No. 800-424-9300

COMMON NAME: ALIKE POWDER - ALL SHADES**CHEMICAL NAME:** N.A.**PRODUCT USE:** Processing of dental temporary crowns and bridges - Powder Component

The following information is provided with regard to the toxicity and hazards of the pure components present in this portion of the unmixed powder/liquid system.

SECTION 2 - HAZARDOUS INGREDIENTS/IDENTITY INFORMATION

COMPONENT	C.A.S.	EXPOSURE LIMITS	LD50/LC50	%
Barium Silicate Glass	Not Listed	TLV - 10 mg/m ³ PEL - 15 mg/m ³ (ACGIH)	N.E.	5-10
Benzoyl Peroxide	94-36-0	TWA=5mg/m ³ (ACGIH)	N.E.	1-5
Dibutyl Phthalate	84-74-2	TWA=5mg/m ³ (ACGIH)	N.E.	7-13

SECTION 3 - PHYSICAL/CHEMICAL PROPERTIES**BOILING POINT** N.E.**VAPOR PRESSURE:** N.E.**VAPOR DENSITY:** N.E.**SOLUBILITY IN WATER:** N.E.**COEFFICIENT OF OIL/WATER DISTRIBUTION:** N.E.**SPECIFIC GRAVITY (H₂O = 1):** = 2.56**MELTING POINT:** 1350°C**EVAPORATION RATE:** N.E.**ODOR THRESHOLD:** N.E.**APPEARANCE AND ODOR:** White to light brown free flowing powder**SECTION 4 - FIRE AND EXPLOSION DATA****FLASH POINT:** N.A.**FLAMMABLE LIMITS:****EXTINGUISHING MEDIA:** Not flammable, for surrounding fire use water fog, foam, dry chemical, carbon dioxide.**SPECIAL FIRE FIGHTING PROCEDURES:** Self-contained breathing apparatus with full face piece and protective clothing.**UNUSUAL FIRE AND EXPLOSION HAZARDS:** None known**HAZARDOUS COMBUSTION PRODUCTS:** Carbon Dioxide, Carbon Monoxide, Methyl Methacrylate**SECTION 5 - REACTIVITY DATA****STABILITY:** Stable ☒Unstable ☐**POLYMERIZATION:** Will Not Occur ☒Will Occur ☐**CONDITIONS TO AVOID:** High heat**INCOMPATIBILITY (MATERIALS TO AVOID):** Hydrofluoric acid**HAZARDOUS DECOMPOSITION OR BY-PRODUCTS:** None

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): Inhalation of dusts may be irritating to the upper respiratory tract.

SIGNS AND SYMPTOMS OF OVEREXPOSURE: N.E.

CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE: N.E.

EMERGENCY FIRST AID PROCEDURES:

INHALATION: Remove victim to fresh air.

INGESTION: For ingestion, give one or two glasses of water to drink. If gastrointestinal symptoms develop, seek medical attention.

SKIN: Wash skin with soap and water. If redness, itching, or a burning sensation develops, seek medication.

EYES: Flush eyes with plenty of water. If redness, itching, or a burning sensation develops, seek medication.

SECTION 7 - PRECAUTIONS FOR SAFE HANDLING AND USE

IN CASE OF RELEASE OR SPILL: Sweep up and recover or mix material with moist absorbent and shovel into waste container. Wash spill area with hot water and detergent. Remove contaminated clothing, wash thoroughly before reuse.

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

STORAGE, HANDLING, AND SPECIAL PRECAUTIONS: Store in a cool dry place; keep away from heat or open flame.

SECTION 8 - CONTROL MEASURES

RESPIRATORY PROTECTION: Minimize exposure in accordance with good hygiene practice. If needed, use MSHA-NIOSH approved respirator for dusts, mists and fumes.

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

PROTECTIVE GLOVES: Impervious gloves

EYE PROTECTION: Safety glasses

OTHER PROTECTIVE CLOTHING OR EQUIPMENT: Eye wash station

WORK/HYGIENIC PRACTICE: Follow routine 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 June 2006

REVIEWED: 20 February 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.

FIRE – 0

TOXICITY – 1

NFPA
REACTIVITY – 0

SPECIAL – OXY

Safety Data Sheet

acc. to OSHA HCS 29 CFR 1910.1200

Printing date 05/09/2016

Version US-EN-Rev 1


Reviewed on 05/09/2016

1 Identification

- **Product identifier**
- **Trade name:** ALIKE (Powder, Shades: 59, 62, 65, 67, 77, and 81)
- **Application of the substance / the mixture** Manufacture of dental prothesis
- **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**
Acute Tox. 4 H332 Harmful if inhaled.
Skin Sens. 1 H317 May cause an allergic skin reaction.
STOT SE 3 H335 May cause respiratory irritation.
- **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**
The product is classified and labeled according to the Globally Harmonized System (GHS).
- **Hazard pictograms**

GHS07
- **Signal word** Warning
- **Hazard-determining components of labeling:**
dibutyl phthalate
dibenzoyl peroxide
- **Hazard statements**
Harmful if inhaled.
May cause an allergic skin reaction.
May cause respiratory irritation.
- **Precautionary statements**
Contaminated work clothing must not be allowed out of the workplace.

(Contd. on page 2)

US

Safety Data Sheet

acc. to OSHA HCS 29 CFR 1910.1200

Printing date 05/09/2016

Version US-EN-Rev 1

Reviewed on 05/09/2016

Trade name: ALIKE (Powder, Shades: 59, 62, 65, 67, 77, and 81)

(Contd. of page 1)

Avoid breathing dust/fume/gas/mist/vapors/spray
 Wear protective gloves.
 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
 Store locked up.
 Dispose of contents/container in accordance with local/regional/national/international regulations.

· **Classification system:**

· **NFPA ratings (scale 0 - 4)**



Health = 1
 Fire = 1
 Reactivity = 1

· **HMIS-ratings (scale 0 - 4)**



Health = 1
 Fire = 1
 Reactivity = 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:**

84-74-2	dibutyl phthalate	1-5%
	poly(methyl methacrylate)	1-5%
94-36-0	dibenzoyl peroxide	< 1%

· **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:**

Immediately remove any clothing soiled by the product.
 Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
 If symptoms persist consult doctor.

· **After inhalation:**

Supply fresh air or oxygen; call for doctor.
 In case of unconsciousness place patient stably in side position for transportation.
 Do not use mouth to mouth or mouth to nose resuscitation.

· **After skin contact:**

Immediately wash with water and soap and rinse thoroughly.
 Seek medical treatment.

(Contd. on page 3)

US

Safety Data Sheet

acc. to OSHA HCS 29 CFR 1910.1200

Printing date 05/09/2016

Version US-EN-Rev 1

Reviewed on 05/09/2016

Trade name: ALIKE (Powder, Shades: 59, 62, 65, 67, 77, and 81)

(Contd. of page 2)

- **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** Allergic reactions
- **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**
In case of fire, the following can be released:
Carbon monoxide and carbon dioxide
- **Advice for firefighters**
- **Protective equipment:**
Mouth respiratory protective device.
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.
Avoid formation of dust.
Avoid contact with the eyes and skin.
Wear protective clothing.
- **Environmental precautions:**
Do not allow product to reach sewage system or any water course.
Inform respective authorities in case of seepage into water course or sewage system.
Do not allow to penetrate the ground/soil.
In case of seepage into the ground inform responsible authorities.
- **Methods and material for containment and cleaning up:**
Pick up mechanically.
Prevent formation of dust.
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.

US

(Contd. on page 4)

Safety Data Sheet

acc. to OSHA HCS 29 CFR 1910.1200

Printing date 05/09/2016

Version US-EN-Rev 1

Reviewed on 05/09/2016

Trade name: ALIKE (Powder, Shades: 59, 62, 65, 67, 77, and 81)

(Contd. of page 3)

7 Handling and storage

- **Handling:**
- **Precautions for safe handling**
 - Observe instructions for use.
 - Ensure good ventilation/exhaustion at the workplace.
 - Prevent formation of dust.
 - Do not inhale dust / smoke / mist.
 - Any deposit of dust which cannot be avoided must be regularly removed.
 - Avoid contact with the eyes and skin.
- **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.
 - Keep receptacle tightly sealed.
- **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 following constituent is the only constituent of the product which has a PEL, TLV or other recommended exposure limit.
 - At this time, the other constituents have no known exposure limits.

84-74-2 dibutyl phthalate

PEL	Long-term value: 5 mg/m ³
REL	Long-term value: 5 mg/m ³
TLV	Long-term value: 5 mg/m ³

- **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.
 - Avoid contact with the eyes and skin.
 - Wash hands before breaks and at the end of work.
 - Keep away from foodstuffs, beverages and feed.
 - Immediately remove all soiled and contaminated clothing.
- **Breathing equipment:** Suitable respiratory protective device recommended.
- **Protection of hands:** Protective gloves
- **Material of gloves**

(Contd. on page 5)

US

Safety Data Sheet

acc. to OSHA HCS 29 CFR 1910.1200

Printing date 05/09/2016

Version US-EN-Rev 1

Reviewed on 05/09/2016

Trade name: ALIKE (Powder, Shades: 59, 62, 65, 67, 77, and 81)

(Contd. of page 4)

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

9 Physical and chemical properties

· **Information on basic physical and chemical properties**

· **General Information**

· **Appearance:**

Form:	Free-flowing powder
Color:	Light Yellow to Light Brown
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 self-igniting.

· **Danger of explosion:** Product does not present an explosion hazard.

· **Explosion limits:**

Lower:	0.1 Vol %
Upper:	2.0 Vol %

· **Vapor pressure:** Not applicable.

· **Density at 20 °C (68 °F):** 2.56 g/cm³ (21.363 lbs/gal)

· **Relative density** Not determined.

· **Vapor density** Not applicable.

· **Evaporation rate** Not applicable.

· **Solubility in / Miscibility with**

Water: Insoluble.

· **Partition coefficient (n-octanol/water):** Not determined.

· **Viscosity:**

Dynamic:	Not applicable.
Kinematic:	Not applicable.

(Contd. on page 6)

US

Safety Data Sheet

acc. to OSHA HCS 29 CFR 1910.1200

Printing date 05/09/2016

Version US-EN-Rev 1

Reviewed on 05/09/2016

Trade name: ALIKE (Powder, Shades: 59, 62, 65, 67, 77, and 81)

(Contd. of page 5)

· Solvent content:	
Organic solvents:	0.0 %
Water:	0.3 %
· Solids content:	
Other information	100.0 % 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:** Reacts with strong acids.
- **Hazardous decomposition products:**
Carbon monoxide
Flammable gases/vapors
Poisonous gases/vapors
Carbon dioxide

11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**
- **LD/LC50 values that are relevant for classification:**
- 84-74-2 dibutyl phthalate**
- Oral LD50 8000 mg/kg (rat (f+m))
- Dermal LD50 20000 mg/kg (rabbit)
- **Primary irritant effect:**
- **on the skin:** No irritant effect.
- **on the eye:** No irritating effect.
- **Sensitization:** Sensitization possible through skin contact.
- **Additional toxicological information:**

- **Carcinogenic categories**

- **IARC (International Agency for Research on Cancer)**

poly(methyl methacrylate)	3
dibenzoyl peroxide	3
titanium dioxide	2B
iron(III) oxide	3

- **NTP (National Toxicology Program)**

None of the ingredients is listed.

- **OSHA-Ca (Occupational Safety & Health Administration)**

None of the ingredients is listed.

(Contd. on page 7)

US

Safety Data Sheet

acc. to OSHA HCS 29 CFR 1910.1200

Printing date 05/09/2016

Version US-EN-Rev 1

Reviewed on 05/09/2016

Trade name: ALIKE (Powder, Shades: 59, 62, 65, 67, 77, and 81)

(Contd. of page 6)

- **Carcinogenic categories' legend:**
 - 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.
- **Repeated dose toxicity.** No further relevant information available.
- **CMR effects (carcinogenity, mutagenicity and toxicity for reproduction)**
 - No further relevant information available.
 - No further relevant information available.

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 2 (Self-assessment): hazardous for water
 - Do not allow product to reach ground water, water course or sewage system.
 - Danger to drinking water if even small quantities leak into the ground.
- **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:**
 - Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

- | | |
|--------------------------------------------------------------------------------------------------------------------------------|------|
| <ul style="list-style-type: none"> · UN-Number · DOT, ADR, ADN, IMDG, IATA | Void |
| <ul style="list-style-type: none"> · UN proper shipping name · DOT, ADR, ADN, IMDG, IATA | Void |

(Contd. on page 8)

US

Safety Data Sheet

acc. to OSHA HCS 29 CFR 1910.1200

Printing date 05/09/2016

Version US-EN-Rev 1

Reviewed on 05/09/2016

Trade name: ALIKE (Powder, Shades: 59, 62, 65, 67, 77, and 81)

(Contd. of page 7)

- | | |
|----------------------------------------------------------------------------------|-----------------|
| · Transport hazard class(es) | |
| · DOT, ADR, ADN, IMDG, IATA | |
| · Class | Void |
| · Packing group | |
| · DOT, ADR, IMDG, IATA | Void |
| · 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": | Void |

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 ingredients is listed.

· Section 313 (Specific toxic chemical listings):

dibutyl phthalate
dibenzoyl peroxide

· TSCA (Toxic Substances Control Act):

poly(methyl methacrylate)
glass, oxide, chemicals
dibutyl phthalate
dibenzoyl peroxide
water

· Carcinogenic categories

· EPA (Environmental Protection Agency)

dibutyl phthalate	D
-------------------	---

· TLV (Threshold Limit Value established by ACGIH)

dibenzoyl peroxide	A4
titanium dioxide	A4
iron(III) oxide	A4

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

titanium dioxide

· GHS label elements

The product is classified and labeled according to the Globally Harmonized System (GHS).

(Contd. on page 9)

US

Safety Data Sheet

acc. to OSHA HCS 29 CFR 1910.1200

Printing date 05/09/2016

Version US-EN-Rev 1

Reviewed on 05/09/2016

Trade name: ALIKE (Powder, Shades: 59, 62, 65, 67, 77, and 81)

(Contd. of page 8)

- **Hazard pictograms**



GHS07

- **Signal word** Warning

- **Hazard-determining components of labeling:**

dibutyl phthalate
dibenzoyl peroxide

- **Hazard statements**

Harmful if inhaled.
May cause an allergic skin reaction.
May cause respiratory irritation.

- **Precautionary statements**

Contaminated work clothing must not be allowed out of the workplace.
Avoid breathing dust/fume/gas/mist/vapors/spray
Wear protective gloves.
IF INHALED: Remove person to fresh air and keep comfortable for breathing.
Store locked up.
Dispose of contents/container in accordance with local/regional/national/international regulations.

- **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

16 Other information

- **Department issuing SDS:** Regulatory Affairs

- **Contact:**

Regulatory Affairs
Telephone No. +1 (708) 597-0900
sds@gcamerica.com

- **Date of preparation / last revision** 05/09/2016 / -

- **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
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)
C.I.: Colour Index
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
NIOSH: National Institute for Occupational Safety
OSHA: Occupational Safety & Health

(Contd. on page 10)

US

Safety Data Sheet

acc. to OSHA HCS 29 CFR 1910.1200

Printing date 05/09/2016

Version US-EN-Rev 1

Reviewed on 05/09/2016

Trade name: ALIKE (Powder, Shades: 59, 62, 65, 67, 77, and 81)

(Contd. of page 9)

TLV: Threshold Limit Value
PEL: Permissible Exposure Limit
REL: Recommended Exposure Limit
BEI: Biological Exposure Limit
Acute Tox. 4: Acute toxicity, Hazard Category 4
Skin Sens. 1: Sensitisation - Skin, Hazard Category 1
STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3

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:

The information contained herein is believed to be true and accurate. However, all statements, recommendations or suggestions are made without any guarantee, representation or warranty, express or implied, on our part. Therefore, no warranty is made or to be implied that the information set out in this document is accurate or complete, and we accordingly exclude all liability in connection with the use of this information or the products referred to herein. All such risks are assumed by the purchaser/user. The information contained herein is also subject to change without notice. For the avoidance of doubt, however, nothing in this document excludes or limits our liability for death or personal injury caused by our negligence or for fraudulent misrepresentation.

US