Safety Data Sheet
acc. to OSHA HCS

Printing date 10/14/2015 Reviewed on 01/28/2015

1 Identification

· **Product identifier**

· **Trade name: A-Component**

· **Details of the supplier of the safety data sheet**
· **Manufacturer/Supplier:**
Uretek™
P.O. Box 1394
Tomball, TX 77377
USA
{ICR}: (888) 810-3107
{USA}: (888) 287-3835
uretekicr.com
uretekusa.com

· **Information department:** EH&S Department
· **Emergency telephone number:**
During normal operating hours: (770) 528-9556
ChemTrec: (800) 424-9300

2 Hazard(s) identification

· **Classification of the substance or mixture**

Health hazard

Resp. Sens. 1	H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
Carc. 2	H351	Suspected of causing cancer.
STOT RE 2	H373	May cause damage to organs through prolonged or repeated exposure.

Acute Tox. 4	H332	Harmful if inhaled.
Skin Irrit. 2	H315	Causes skin irritation.
Eye Irrit. 2A	H319	Causes serious eye irritation.
Skin Sens. 1	H317	May cause an allergic skin reaction.
STOT SE 3	H335	May cause respiratory irritation.

· **Label elements**
· **GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).
· **Hazard pictograms**

GHS07

GHS08

· **Signal word** Danger

· **Hazard-determining components of labeling:**
diphenylmethanediisocyanate,isomeres and homologues
4,4'-methylenediphenyl diisocyanate

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o-(p-isocyanatobenzyl)phenyl isocyanate

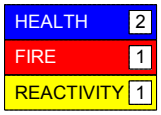
· **Hazard statements**
Harmful if inhaled.
Causes skin irritation.
Causes serious eye irritation.
May cause allergy or asthma symptoms or breathing difficulties if inhaled.
May cause an allergic skin reaction.
Suspected of causing cancer.
May cause respiratory irritation.
May cause damage to organs through prolonged or repeated exposure.

· **Precautionary statements**
In case of inadequate ventilation wear respiratory protection.
Avoid breathing dust/fume/gas/mist/vapors/spray
Wear protective gloves/protective clothing/eye protection/face protection.
Wash thoroughly after handling.
Use only outdoors or in a well-ventilated area.
Contaminated work clothing must not be allowed out of the workplace.
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
If experiencing respiratory symptoms: Call a POISON CENTER/doctor.
IF INHALED: Remove person to fresh air and keep comfortable for breathing.
Call a POISON CENTER/doctor if you feel unwell.
Wash contaminated clothing before reuse.
IF exposed or concerned: Get medical advice/attention.
If skin irritation or rash occurs: Get medical advice/attention.
If eye irritation persists: Get medical advice/attention.
Get medical advice/attention if you feel unwell.
In case of fire: Use for extinction: CO2, sand, extinguishing powder.
In case of fire: Use for extinction: Water spray.
IF ON SKIN: Wash with plenty of water.
Take off contaminated clothing and wash it before reuse.
Store locked up.
Store in a well-ventilated place. Keep container tightly closed.
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 = 2
Fire = 1
Reactivity = 1

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

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· **vPvB:** Not applicable.

3 Composition/information on ingredients

· **Chemical characterization: Mixtures**
· **Description:** Mixture of the substances listed below with nonhazardous additions.

· **Dangerous components:**		
9016-87-9	diphenylmethanediisocyanate,isomeres and homologues Resp. Sens. 1, H334; Carc. 2, H351; STOT RE 2, H373; Acute Tox. 4, H332; Skin Irrit. 2, H315; Eye Irrit. 2A, H319; Skin Sens. 1, H317; STOT SE 3, H335	30-60%
101-68-8	4,4'-methylenediphenyl diisocyanate Resp. Sens. 1, H334; Carc. 2, H351; STOT RE 2, H373; Acute Tox. 4, H332; Skin Irrit. 2, H315; Eye Irrit. 2A, H319; Skin Sens. 1, H317; STOT SE 3, H335	15-40%
5873-54-1	o-(p-isocyanatobenzyl)phenyl isocyanate Resp. Sens. 1, H334; Carc. 2, H351; STOT RE 2, H373; Acute Tox. 4, H332; Skin Irrit. 2, H315; Eye Irrit. 2A, H319; Skin Sens. 1, H317; STOT SE 3, H335	1-5%

4 First-aid measures

· **Description of first aid measures**
· **General information:**
Symptoms of exposure may occur after several hours; therefore medical observation for at least 48 hours after exposure.
First Aid responders should pay attention to self-protection and use the recommended protective clothing. If potential for exposure exists refer to Section 8 for specific personal protective quipment.
· **After inhalation:**
Supply fresh air and to be sure call for a doctor.
In case of unconsciousness place patient stably in side position for transportation.
If breathing is difficult, oxygen should be administered by qualified personnel.
· **After skin contact:**
Immediately wash with water and soap and rinse thoroughly.
Get medical attention if symptoms occur.
Wash clothing before reuse.
Clean shoes thoroughly before reuse.
Suitable emergency safety shower should be immediately available.
· **After eye contact:**
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
· **After swallowing:**
Do not induce vomiting; immediately call for medical help.
Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person.
· **Information for doctor:**
Symptomatic treatment and supportive therapy as indicated. Following severe exposure the patient should be kept under medical review for at least 48 hours.
· **Most important symptoms and effects, both acute and delayed**
Eye Contact: Adverse symptoms may include the following: pain or irritation, watering, redness
Inhalation: Adverse symptoms may include: Respiratory tract irritation, coughing, wheezing and breathing difficulties, asthma.
Skin Contact: Adverse symptoms may include the following: irritation, redness.

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Ingestion: No specific data
· **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

5 Fire-fighting measures

· **Extinguishing media**
· **Suitable extinguishing agents:**
Use fire fighting measures that suit the environment.
ABC powder
Carbon dioxide
· **For safety reasons unsuitable extinguishing agents:**
Unsuitable extinguishing media: Water may be used if no other availalbe and then in copious quantities. Reaction between water and hot isocyanate may be vigorous. Prevent washings from entering water courses, keep fire exposed containers cool by spraying with water.
· **Special hazards arising from the substance or mixture**
In a fire or if heated, a pressure increase will occur and the container may bust.
Combusion products may include: Carbon monoxide, carbon dioxide, nitrogen oxides, hydrocarbons and HCN.
· **Advice for firefighters**
Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Stay up wind and keep out of low areas where gases (fumes) can accumulate.
· **Protective equipment:**
Mouth respiratory protective device.
Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. PVC boots, gloves, safety helmet and protective clothing should be worn.
Wear full protective suit.
· **Additional information**
Due to reaction of water producing CO2-gas, a hazardous build-up of pressure could result if contaminated containers are re-sealed. Containers may burst if overheated.

6 Accidental release measures

· **Personal precautions, protective equipment and emergency procedures**
No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see Section 8).
· **Environmental precautions:**
Prevent from entering into soil or ditches. Inform the relevant authorities if the product has caused environmental pollution.
Do not allow to enter sewers/ surface or ground water.
· **Methods and material for containment and cleaning up:**
Absorb with materials such as: Dirt, Vermiculite, Sand, Clay.
Ensure adequate ventilation.
Contain spilled material if possible. Do NOT use absorbent materials such as: Cement powder (Note: may generate heat). Collect in suitable and properly label open containers. Do not place in sealed containers. Suitable containers include: Metal drums, Plastic drums, Polylined fiber pacs. Wash spill site with large quantities of water. Attempt to neutralize by addiing suitable decontaminant solution: Formulation 1: sodium carbonate 5 - 10%; liquid detergent 0.2 - 2%; water to make up to 100%, OR Formulation 2: concentrated

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ammonia solution 3- 8%; liquid detergent 0.2 -2%; water to make up to 100%. If ammonia is used, use good ventilation to prevent vapor exposure. See Section 13, for additional information.

· **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**
Ensure good ventilation/exhaustion at the workplace.
Avoid contact with eyes and prolonged or repeated contact with skin.
Wash thoroughly after handling.
· **Information about protection against explosions and fires:** No special measures required.

· **Conditions for safe storage, including any incompatibilities**
· **Storage:**
· **Requirements to be met by storerooms and receptacles:** No special requirements.
· **Information about storage in one common storage facility:**
Store in dry place. Protect from atmospheric moisture. Do not store product contaminated with water to prevent potential hazardous reaction
· **Further information about storage conditions:**
Keep receptacle tightly sealed.
Storage Period: 12 months
Storage Temp: 15 -35℃
· **Specific end use(s)** See the technical data sheet on this product for further information.

8 Exposure controls/personal protection

· **Control parameters**

· **Components with limit values that require monitoring at the workplace:**	
101-68-8 4,4'-methylenediphenyl diisocyanate	
PEL	Ceiling limit value: 0.2 mg/m³, 0.02 ppm
REL	Long-term value: 0.05 mg/m³, 0.005 ppm Ceiling limit value: 0.2* mg/m³, 0.02* ppm *10-min
TLV	Long-term value: 0.051 mg/m³, 0.005 ppm

· **Additional information:** The lists that were valid during the creation were used as basis.

· **Exposure controls**
· **Personal protective equipment:**
· **General protective and hygienic measures:**
Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing.
Wash hands before breaks and at the end of work.
Avoid contact with the eyes and skin.
Wash contaminated clothing before reuse.
Ensure that eyewash stations and safety showers are close to the workstation area.

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· **Breathing equipment:**
In case of brief exposure at low atmospheric levels use an approved air-purifying respiratory equiped with an organic vapor sorbent and a particle filter. In case of intensive or longer exposure use a positive pressure air-supplying respirator (air line or self-contained breathing apparatus).
· **Protection of hands:**

Protective gloves

The workplace factors such as, but not limited to: Other chemicals which may be handled, physical requirements (cut/puncture protection, dexterity, thermal protection), potential body reactions to glove materials, as well as the instructions/specifications provided by the glove supplier.
· **Material of gloves**
Use chemical resistant gloves classified under Standard EN374: Protective gloves against chemicals and micro-organisms. Examples of preferred glove barrier materials include: Butyl rubber, Polyethylene, EVAL, Neoprene, Nitrile, Viton. When prolonged or frequently repeated contact may occur, a glove with a protection class of 5 or higher is recommended.
· **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:**

Tightly sealed chemical goggles consistent with EN 166 or equivalent. Wear a face-shield which allows use of chemical goggles, or wear full-face respirator to protect face and eyes when there is any likelyhood of splashes.

· **Body protection:**
Personal protective clothing for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

9 Physical and chemical properties

· **Information on basic physical and chemical properties**	
· **General Information**	
· **Appearance:**	
Form:	Fluid
Color:	According to product specification
· **Odor:**	Characteristic
· **Odour threshold:**	Not determined.
· **pH-value:**	Not determined.
· **Change in condition**	
Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	Undetermined.
· **Flash point:**	218 °C (424 °F)
· **Flammability (solid, gaseous):**	Not applicable.
· **Ignition temperature:**	
Decomposition temperature:	Not determined.

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· **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 determined.
· **Density:**	Not determined.
· **Relative density**	Not determined.
· **Vapour density**	Not determined.
· **Evaporation rate**	Not determined.
· **Solubility in / Miscibility with**	
Water:	Not miscible or difficult to mix.
· **Partition coefficient (n-octanol/water):**	Not determined.
· **Viscosity:**	
Dynamic:	Not determined.
Kinematic:	Not determined.
· **Other information**	No further relevant information available.

10 Stability and reactivity

· **Reactivity**
Diisocyanates react with many materials and the rate of reaction increases with temperature as well as increased contact; these reactions can be violent. Contact is increased by stirring or if the other material mixes with the diisocyanate. Diisocyanates are not soluable in water and sink to the bottom, but react slowly at the interface. The reaction forms carbon dioxide gas and a layer of solid polyurea. Reaction with water will generate carbon dioxide and heat.
· **Chemical stability** This product is stable at recommended storage conditions (See Section 7).
· **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
· **Possibility of hazardous reactions**
Can occur. Exposure to elevated temperatures can cause product to decompose and generate gas. This can cause pressure build-up and/or rupturing of closed containers. Polymerization can be catalyzed by: Strong bases. Water.
· **Conditions to avoid**
Exposure to elevated temperatures can cause product to decompose. Generation of gas during decomposition can cause pressure in closed systems. Pressure build-up can be rapid. Avoid moisture. Mateial reacts slowly with water, releasing carbon dioxide which can cause pressure buildup and rupture of closed containers. Elevated temperatures accelerate this reaction.
· **Incompatible materials:** Water, alcohols, amines, bases and acids
· **Hazardous decomposition products:**
Combustion products may include: carbon oxides (CO, CO2) nitrogen oxides (NO, NO2, etc.) hydrocarbons and HCN.

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11 Toxicological information

· **Information on toxicological effects**
· **Acute toxicity:**

· **LD/LC50 values that are relevant for classification:**		
9016-87-9 diphenylmethanediisocyanate,isomeres and homologues		
Oral	LD50	>10000 mg/kg (rat)
Dermal	LD50	>9400 mg/kg (rabbit)
Inhalative	LC50/4 h	0.49 mg/l (rat)
101-68-8 4,4'-methylenediphenyl diisocyanate		
Oral	LD50	>10000 mg/kg (rat)
Dermal	LD50	>9400 mg/kg (rabbit)
Inhalative	LC50/4 h	0.49 mg/l (rat)

· **Primary irritant effect:**
· **on the skin:** Irritant to skin and mucous membranes.
· **on the eye:** Irritating effect.
· **Sensitization:**
Sensitization possible through inhalation.
Sensitization possible through skin contact.
· **Additional toxicological information:**
The product shows the following dangers according to internally approved calculation methods for preparations:
Harmful
Irritant
May cause damage to organs through prolonged or repeated exposure if inhaled. Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels

· **Carcinogenic categories**

· **IARC (International Agency for Research on Cancer)**	
9016-87-9	diphenylmethanediisocyanate,isomeres and homologues
101-68-8	4,4'-methylenediphenyl diisocyanate

· **NTP (National Toxicology Program)**
None of the ingredients is listed.

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

12 Ecological information

· **Toxicity**

· **Aquatic toxicity:**	
9016-87-9 diphenylmethanediisocyanate,isomeres and homologues	
EC50 (static)	>1000 mg/kg (daphnia)
101-68-8 4,4'-methylenediphenyl diisocyanate	
EC50 (static)	>1000 mg/kg (daphnia)

· **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.

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· **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:**
The generation of waste should be avoided or minimized wherever possible. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe way. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

· **Uncleaned packagings:**
· **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

· **UN-Number**	
· **DOT**	UN3082
· **ADN, IMDG, IATA**	not regulated
· **UN proper shipping name**	
· **DOT**	Environmentally hazardous substances, liquid, n.o.s. (Methylene Diphenyl Diisocyanate)
· **ADN, IMDG, IATA**	not regulated
· **Transport hazard class(es)**	
· **DOT**	DOT Non-Bulk: Not Regulated
· **Class**	9 Miscellaneous dangerous substances and articles
· **Label**	9
· **ADN/R Class:**	not regulated
· **Packing group**	
· **DOT**	III
· **IMDG, IATA**	not regulated
· **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.

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· **UN "Model Regulation":** not regulated

15 Regulatory information

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

· **Clean Air Act**

101-68-8	4,4'-methylenediphenyl diisocyanate	15-40%

· **Clean Water Act**

None of the ingredients is listed.

· **Sara**

· **SARA 302/304 Extremely Hazardous Substance**

None of the ingredients is listed.

· **Section 355 (extremely hazardous substances):**

None of the ingredients is listed.

· **Section 313 (Specific toxic chemical listings):**

9016-87-9	diphenylmethanediisocyanate,isomeres and homologues
101-68-8	4,4'-methylenediphenyl diisocyanate

· **TSCA (Toxic Substances Control Act):**

All ingredients are listed.

· **Massachusetts Right To Know**

All ingredients are listed.

· **New Jersey Right To Know**

All ingredients are listed.

· **Pennsylvania Right To Know**

All ingredients are listed.

· **Proposition 65**

· **Chemicals known to cause cancer:**

None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for females:**

None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for males:**

None of the ingredients is listed.

· **Chemicals known to cause developmental toxicity:**

None of the ingredients is listed.

· **Carcinogenic categories**

· **EPA (Environmental Protection Agency)**

9016-87-9	diphenylmethanediisocyanate,isomeres and homologues	CBD
101-68-8	4,4'-methylenediphenyl diisocyanate	D, CBD

· **TLV (Threshold Limit Value established by ACGIH)**

None of the ingredients is listed.

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

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· **GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).
· **Hazard pictograms**

GHS07 GHS08

· **Signal word** Danger

· **Hazard-determining components of labeling:**
diphenylmethanediisocyanate,isomeres and homologues
4,4'-methylenediphenyl diisocyanate
o-(p-isocyanatobenzyl)phenyl isocyanate
· **Hazard statements**
Harmful if inhaled.
Causes skin irritation.
Causes serious eye irritation.
May cause allergy or asthma symptoms or breathing difficulties if inhaled.
May cause an allergic skin reaction.
Suspected of causing cancer.
May cause respiratory irritation.
May cause damage to organs through prolonged or repeated exposure.
· **Precautionary statements**
In case of inadequate ventilation wear respiratory protection.
Avoid breathing dust/fume/gas/mist/vapors/spray
Wear protective gloves/protective clothing/eye protection/face protection.
Wash thoroughly after handling.
Use only outdoors or in a well-ventilated area.
Contaminated work clothing must not be allowed out of the workplace.
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
If experiencing respiratory symptoms: Call a POISON CENTER/doctor.
IF INHALED: Remove person to fresh air and keep comfortable for breathing.
Call a POISON CENTER/doctor if you feel unwell.
Wash contaminated clothing before reuse.
IF exposed or concerned: Get medical advice/attention.
If skin irritation or rash occurs: Get medical advice/attention.
If eye irritation persists: Get medical advice/attention.
Get medical advice/attention if you feel unwell.
In case of fire: Use for extinction: CO2, sand, extinguishing powder.
In case of fire: Use for extinction: Water spray.
IF ON SKIN: Wash with plenty of water.
Take off contaminated clothing and wash it before reuse.
Store locked up.
Store in a well-ventilated place. Keep container tightly closed.
Dispose of contents/container in accordance with local/regional/national/international regulations.

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

16 Other information

Uretek™ urges each customer of recipient of this (M)SDS to study it carefully and consult appropriate expertise, as necessary or appropriate, to become aware of and understand the data contained in this (M)SDS and any hazards associated with the product. The information herein is provided in good faith and believed to be accurate as of the effectivie date shown on this (M)SDS. However, no warranty, express or implied is given. Regulatory reuirements are subject to change and may differ between various locations It is the buyer's/user's responsibility to ensure that his/her activities comply with all federal, state, provincial or local laws. The information presented here pertains only to the product as shipped. Since conditions for use of the produt are not under the control of the manufacturer, it is the buyer's/user's duty to determine the conditions necessary for the safe use of this product. Due to the proliferation of sources for information such as manufacturer-specific (M)SDS, we are not and cannot be responsible for (M)SDSs obtained from any source other than ourselves. If you have obtained an (M)SDS from another source or if you are not sure that the (M)SDS you have is current, please contact us for the most curent version.

· **Department issuing SDS:** Environmental Health & Safety Department.
· **Contact:** M. Phillips
· **Date of preparation / last revision** 10/14/2015 / -
· **Abbreviations and acronyms:**
IMDG: International Maritime Code for Dangerous Goods
DOT: US Department of Transportation
IATA: International Air Transport Association
ACGIH: American Conference of Governmental Industrial Hygienists
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
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
Acute Tox. 4: Acute toxicity, Hazard Category 4
Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2
Eye Irrit. 2A: Serious eye damage/eye irritation, Hazard Category 2A
Resp. Sens. 1: Sensitisation - Respirat., Hazard Category 1
Skin Sens. 1: Sensitisation - Skin, Hazard Category 1
Carc. 2: Carcinogenicity, Hazard Category 2
STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3
STOT RE 2: Specific target organ toxicity - Repeated exposure, Hazard Category 2