



# SAFETY DATA SHEET

## TIGI Bed Head Masterpiece Hairspray Extra Strong Hold (Aerosol)

### Section 1. Identification

**Product name** : TIGI Bed Head Masterpiece Hairspray Extra Strong Hold (Aerosol)  
**Product description** : Hair Styling Product  
**Internal product code** : TIGI00148\_US

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

Identified uses
Consumer uses

**Supplier's details** : TIGI Linea, LP  
 1655 Waters Ridge Dr.  
 Lewisville TX 75057  
 USA

**Emergency telephone number (with hours of operation)** : Phone #: 469-528-4300 (Normal business hours)  
 Emergency #: 800-259-8596 (24 hours)  
 CHEMTREC #: 800-424-9300 or 703-527-3887 (24 hours, Transportation Emergencies)

#### Consumer Information:

For information regarding the use of this product by a consumer, please refer directly to the product label. This industrial MSDS is provided for workplace employees, per US OSHA regulations. It contains recommendations for handling of this product in an occupational, or workplace, setting.

Any first aid or warnings that are applicable to consumer use are stated directly on the product label, in accordance with all applicable government regulations.

### Section 2. Hazards identification

**OSHA/HCS status** : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

**Classification of the substance or** : FLAMMABLE AEROSOLS - Category 2

**mixture** : GASES UNDER PRESSURE - Compressed gas  
EYE IRRITATION - Category 2A

**GHS label elements**

**Hazard pictograms** : 

**Signal word** : Warning  
**Hazard statements** : Flammable aerosol.  
Contains gas under pressure; may explode if heated.  
Causes serious eye irritation.  
Pressurized container: may burst if heated.

**Precautionary statements**

**General** : Read label before use. If medical advice is needed, have product container or label at hand.  
**Prevention** : Do not pierce or burn, even after use. Do not spray on an open flame or other ignition source. Do not breathe dust or mist. Keep away from heat, sparks, open flames and hot surfaces. - No smoking.  
**Response** : IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical attention.  
**Storage** : Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F. Store in a well-ventilated place.  
**Disposal** : Dispose of used up container in accordance with local regulations.  
**Supplemental label elements** : None known.  
**Hazards not otherwise classified** : None known.

**Section 3. Composition/information on ingredients**

**Substance/mixture** : Mixture

**CAS number/other identifiers**

Ingredient name	%	CAS number
Hydrofluorocarbon 152a	25 - 50	75-37-6
Alcohol	50 - 75	64-17-5

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

## Section 4. First aid measures

### Description of necessary first aid measures

- Eye contact** : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. If irritation persists, get medical attention.
- Inhalation** : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
- Skin contact** : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse.
- Ingestion** : Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if adverse health effects persist or are severe. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

### Most important symptoms/effects, acute and delayed

#### Potential acute health effects

- Eye contact** : Causes eye irritation.
- Inhalation** : Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.
- Skin contact** : No known significant effects or critical hazards.
- Ingestion** : No known significant effects or critical hazards.

**Over-exposure signs/symptoms**

- Eye contact** : Adverse symptoms may include the following:  
irritation  
watering  
redness
- Inhalation** : Adverse symptoms may include the following:  
respiratory tract irritation  
coughing
- Skin contact** : No specific data.
- Ingestion** : No specific data.

**Indication of immediate medical attention and special treatment needed, if necessary**

- Notes to physician** : In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
- Specific treatments** : No specific treatment.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

See toxicological information (Section 11)

**Section 5. Fire-fighting measures**

**Extinguishing media**

- Suitable extinguishing media** : Use an extinguishing agent suitable for the surrounding fire.
- Unsuitable extinguishing media** : None known.
- NFPA 30B Classification** : Aerosol Level 1

- Specific hazards arising from the chemical** : Flammable aerosol. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. Gas may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back, causing fire or explosion. Bursting aerosol containers may be propelled from a fire at high speed. Runoff to sewer may create fire or explosion hazard.

- Hazardous thermal decomposition products** : Decomposition products may include the following materials:  
carbonyl halides

- Special protective actions for fire-fighters** : 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. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

- Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated

in positive pressure mode.

## Section 6. Accidental release measures

### Personal precautions, protective equipment and emergency procedures

- For non-emergency personnel** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. In the case of aerosols being ruptured, care should be taken due to the rapid escape of the pressurized contents and propellant. If a large number of containers are ruptured, treat as a bulk material spillage according to the instructions in the clean-up section. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
- For emergency responders** : If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
- Environmental precautions** : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

### Methods and materials for containment and cleaning up

- Small spill** : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
- Large spill** : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

## Section 7. Handling and storage

### Precautions for safe handling

- Protective measures** : Put on appropriate personal protective equipment (see Section 8).

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Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50°C/122 °F. Do not pierce or burn, even after use. Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing gas. Avoid breathing vapor or mist. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Empty containers retain product residue and can be hazardous.

**Advice on general occupational hygiene** : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

**Conditions for safe storage, including any incompatibilities** : Store in accordance with local regulations. Store away from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Protect from sunlight. Eliminate all ignition sources. Use appropriate containment to avoid environmental contamination.

## Section 8. Exposure controls/personal protection

### Control parameters

#### Occupational exposure limits

<b>Ingredient name</b>	<b>Exposure limits</b>
Hydrofluorocarbon 152a	<b>AIHA WEEL 1999-01-01 TWA</b> 1,000 ppm
Alcohol	<b>OSHA PEL 1989 1989-03-01 TWA</b> 1,900 mg/m <sup>3</sup> 1,000 ppm Form: <b>OSHA PEL 1993-06-30 TWA</b> 1,900 mg/m <sup>3</sup> 1,000 ppm Form: <b>NIOSH REL 1994-06-01 TWA</b> 1,900 mg/m <sup>3</sup> 1,000 ppm Form: <b>ACGIH TLV 2008-11-24 STEL</b> 1,000 ppm

**Appropriate engineering controls** : Use only with adequate ventilation. If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust

ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

- Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

### **Individual protection measures**

- Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

- Eye/face protection** : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles.

### **Skin protection**

- Hand protection** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated. For prolonged or repeated handling, use Latex gloves.

- Body protection** : Personal protective equipment 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., When there is a risk of ignition from static electricity, wear anti-static protective clothing., For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves.

- Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

- Respiratory protection** : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

## Section 9. Physical and chemical properties

### Appearance

Physical state	:	liquid [aerosol]
Color	:	amber
Odor	:	Characteristic.
Odor threshold	:	Not available.
pH	:	9.1 [Conc. (% w/w): 1,000 g/l ]
Melting point	:	Not applicable
Boiling point	:	Not available.
Flash point	:	not applicable
Evaporation rate	:	Not available.
Flammability (solid, gas)	:	Not available.
Lower and upper explosive (flammable) limits	:	<b>Lower:</b> Not available. <b>Upper:</b> Not available.
Vapor density	:	Not available.
Relative density	:	Not available.
Solubility	:	Not available.
Solubility in water	:	Not available.
Partition coefficient: n-octanol/water	:	Not available.
Auto-ignition temperature	:	Not available.
Decomposition temperature	:	Not available.
Viscosity	:	<b>Dynamic:</b> Not available. <b>Kinematic:</b> Not available.

### Aerosol product

Type of aerosol	:	Spray
Can pressure	:	6894.76 hPa at 54°C/130°F
Heat of combustion	:	< 20000000 J/kg
Ignition distance	:	70 cm
Enclosed space ignition - Time equivalent	:	Not available.
Enclosed space ignition - Deflagration density	:	Not available.
Flame height	:	Not available.
Flame duration	:	Not available.

## Section 10. Stability and reactivity

Reactivity	:	No specific test data related to reactivity available for this product or its ingredients.
Chemical stability	:	The product is stable.
Possibility of hazardous reactions	:	Under normal conditions of storage and use, hazardous reactions will not occur.
Conditions to avoid	:	Avoid all possible sources of ignition (spark or flame).
Incompatible materials	:	No specific data.

**Hazardous decomposition products** : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## Section 11. Toxicological information

### Information on toxicological effects

#### Acute toxicity

**Conclusion/Summary** : Very low toxicity to humans or animals.

#### Irritation/Corrosion

##### **Conclusion/Summary**

**Skin** : Non-irritant to skin.  
**Eyes** : Causes eye irritation.  
**Respiratory** : Non-irritating to the respiratory system.

#### Sensitization

##### **Conclusion/Summary**

**Skin** : Not sensitizing  
**Respiratory** : Not sensitizing

#### Mutagenicity

**Conclusion/Summary** : Not applicable.

#### Carcinogenicity

**Conclusion/Summary** : Not classified or listed by IARC, NTP, OSHA, EU and ACGIH.

#### Classification

Product/ingredient name	OSHA	IARC	NTP
Alcohol	-	1	-

#### Reproductive toxicity

**Conclusion/Summary** : Not applicable.

#### Teratogenicity

**Conclusion/Summary** : Not applicable.

#### Specific target organ toxicity (single exposure)

Not available.

#### Specific target organ toxicity (repeated exposure)

Not available.

#### Aspiration hazard

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Not available.

**Information on the likely routes of exposure** : Not available.

**Potential acute health effects**

**Eye contact** : Causes eye irritation.  
**Inhalation** : Exposure to decomposition products may cause a health hazard.  
Serious effects may be delayed following exposure.  
**Skin contact** : No known significant effects or critical hazards.  
**Ingestion** : No known significant effects or critical hazards.

**Symptoms related to the physical, chemical and toxicological characteristics**

**Eye contact** : Adverse symptoms may include the following:  
irritation  
watering  
redness  
**Inhalation** : Adverse symptoms may include the following:  
respiratory tract irritation  
coughing  
**Skin contact** : No specific data.  
**Ingestion** : No specific data.

**Delayed and immediate effects and also chronic effects from short and long term exposure**

**Short term exposure**

**Potential immediate effects** : Not available.  
**Potential delayed effects** : Not available.

**Long term exposure**

**Potential immediate effects** : Not available.  
**Potential delayed effects** : Not available.

**Potential chronic health effects**

**Conclusion/Summary** : Very low toxicity to humans or animals.  
**General** : No known significant effects or critical hazards.  
**Carcinogenicity** : No known significant effects or critical hazards.  
**Mutagenicity** : No known significant effects or critical hazards.  
**Teratogenicity** : No known significant effects or critical hazards.  
**Developmental effects** : No known significant effects or critical hazards.  
**Fertility effects** : No known significant effects or critical hazards.

**Numerical measures of toxicity**

**Acute toxicity estimates**

<b>Route</b>	<b>ATE value</b>
Oral	>5000 milligram per kilogram

## Section 12. Ecological information

### Toxicity

**Conclusion/Summary** : No known significant effects or critical hazards.

### Persistence and degradability

**Conclusion/Summary** : No known significant effects or critical hazards.

**Conclusion/Summary** : No known significant effects or critical hazards.

### Mobility in soil

**Soil/water partition coefficient (KOC)** : Not available.

**Other adverse effects** : No known significant effects or critical hazards.

## Section 13. Disposal considerations

**Disposal methods** : The generation of waste should be avoided or minimized wherever possible. 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. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Do not puncture or incinerate container.





**RCRA classification** : D001 (Ignitable)

**United States - RCRA Acute hazardous waste "P" List:** Not listed

**United States - RCRA Toxic hazardous waste "U" List:** Not listed

## Section 14. Transport information

FOR SHIPMENT IN CONSUMER	<u>GROUND</u>	<u>WATER</u>	<u>AIR</u>
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PACKAGING			
PROPER SHIPPING NAME:	Aerosols, Flammable	Aerosols	Aerosols, Flammable
HAZARD CLASS:	2.1	2.1	2.1
UN/ID #:	UN1950	UN1950	UN1950
PACKING GROUP:	None	None	None
REQUIRED MARKINGS and/or LABELS:			  <div style="border: 1px solid black; padding: 2px;">                     UN1950                      Aerosols, Flammable                 </div>
MARKINGS and/or LABEL TYPES:	Limited Quantity	Limited Quantity	Limited Quantity, Flammable Gas
ADDITIONAL INFORMATION:	ERG #126	ERG #126 Marine Pollutant: Not regulated	ERG #126 Proper Shipping Name & UN # must be shown on the package.

**Special precautions for user** : Transport within user’s premises: always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.’

**Transport in bulk according to Annex II of MARPOL and the IBC Code**

Not available.

## Section 15. Regulatory information

**U.S. Federal regulations** : **United States - TSCA 12(b) - Chemical export notification:** None of the components are listed.  
**United States - TSCA 4(a) - Final Test Rules:** Not listed  
**United States - TSCA 4(a) - ITC Priority list:** Not listed  
**United States - TSCA 4(a) - Proposed test rules:** Not listed  
**United States - TSCA 4(f) - Priority risk review:** Not listed  
**United States - TSCA 5(a)2 - Final significant new use rules:** Not listed  
**United States - TSCA 5(a)2 - Proposed significant new use rules:** Not listed  
**United States - TSCA 5(e) - Substances consent order:** Not listed  
**United States - TSCA 6 - Final risk management:** Not listed  
**United States - TSCA 6 - Proposed risk management:** Not listed  
**United States - TSCA 8(a) - Chemical risk rules:** Not listed  
**United States - TSCA 8(a) - Dioxin/Furane precursor:** Not listed  
**United States - TSCA 8(a) - Chemical Data Reporting (CDR):** Not determined  
**United States - TSCA 8(a) - Preliminary assessment report**

**(PAIR):** Not listed  
**United States - TSCA 8(c) - Significant adverse reaction (SAR):**  
 Not listed  
**United States - TSCA 8(d) - Health and safety studies:** Not listed  
**United States - EPA Clean water act (CWA) section 307 - Priority pollutants:** Not listed  
**United States - EPA Clean water act (CWA) section 311 - Hazardous substances:** Not listed  
**United States - EPA Clean air act (CAA) section 112 - Accidental release prevention - Flammable substances:** Listed  
 Hydrofluorocarbon 152a  
**United States - EPA Clean air act (CAA) section 112 - Accidental release prevention - Toxic substances:** Not listed  
**United States - Department of commerce - Precursor chemical:**  
 Not listed

**Clean Air Act Section 112(b) Hazardous Air Pollutants (HAPs)** : Not listed  
**Clean Air Act Section 602 Class I Substances** : Not listed  
**Clean Air Act Section 602 Class II Substances** : Not listed  
**DEA List I Chemicals (Precursor Chemicals)** : Not listed  
**DEA List II Chemicals (Essential Chemicals)** : Not listed  
  
**SARA 302/304** : Not applicable

**Composition/information on ingredients**

Name	%	EHS	SARA 302/304
Hydrofluorocarbon 152a	25 - 50	Yes.	SARA 304 RQ: 100 lb(s)
Alcohol	50 - 75	Yes.	SARA 304 RQ: 100 lb(s)

**SARA 304 RQ** : 189.4 lbs

**SARA 311/312**

**Classification** : Fire hazardSudden release of pressure

**Composition/information on ingredients**

Name	%	Classification
Hydrofluorocarbon 152a	25 - 50	F, P
Alcohol	50 - 75	F, AH

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**SARA 313**

None of the components are listed.

**State regulations**

- Massachusetts** : The following components are listed:  
Alcohol
- New York** : None of the components are listed.
- New Jersey** : The following components are listed:  
Alcohol
- Pennsylvania** : The following components are listed:  
Alcohol

**US California 22CCR Appendix X Substances**

Alcohol

**California Prop. 65** : Not available.

**United States inventory (TSCA 8b)** : Not determined.

**Canada inventory** : Not determined.

**International regulations**

- International lists** : **Australia inventory (AICS):** Not determined.  
**Malaysia Inventory (EHS Register):** Not determined.  
**Japan inventory:** Not determined.  
**China inventory (IECSC):** Not determined.  
**Korea inventory:** Not determined.  
**New Zealand Inventory of Chemicals (NZIoC):** Not determined.  
**Philippines inventory (PICCS):** Not determined.  
**Taiwan Chemical Substances Inventory (TCSI):** Not determined.

**Chemical Weapons Convention** : Not listed

**List Schedule I Chemicals**

**Chemical Weapons Convention** : Not listed

**List Schedule II Chemicals**

**Chemical Weapons Convention** : Not listed

**List Schedule III Chemicals**

**Section 16. Other information**

This product is packaged for retail sale and intended for consumer use. The U.S. OSHA Hazard Communication Standard (29 CFR 1910.1200) does not apply to "consumer products" as defined by the U.S. Consumer Product Safety Act and Federal Hazardous Substances Act, including consumer products used in the workplace under typical duration and frequency of exposure as experienced by consumers when used for the intended purpose. This Safety Data Sheet (SDS) is provided as a courtesy to assist with proper use and safe handling. Applicable consumer product use and safety information is provided on the product label and is included for easy reference in Section 16 of this SDS. This SDS is designed to cover both U.S. and Canada. Differences between U.S. and Canadian requirements are noted where applicable.

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Copyright ©2001, National Fire Protection Association, Quincy, MA 02269. This warning system is intended to be interpreted and applied only by properly trained individuals to identify fire, health and reactivity hazards of chemicals. The user is referred to certain limited number of chemicals with recommended classifications in NFPA 49 and NFPA 325, which would be used as a guideline only. Whether the chemicals are classified by NFPA or not, anyone using the 704 systems to classify chemicals does so at their own risk.

**History**

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**Key to abbreviations**

: ATE = Acute Toxicity Estimate  
ACGIH = American Conference of Governmental & Industrial Hygienists  
AH = Acute Hazard  
BCF = Bioconcentration Factor  
CAA = Clean Air Act  
CARB = California Air Resources Board  
CCR = California Code of Regulations  
CERCLA = Comprehensive Environmental Response, Compensation & Liability Act  
CFR = Code of Federal Regulations  
CH = Chronic Hazard  
CWA = Clean Water Act  
DEA = Drug Enforcement Administration  
DOT = Department of Transportation  
EC = European Commission  
EPCRA = Emergency Planning and Community Right-To-Know Act  
EST = Eastern Standard Time  
F = Fire  
HAPS = Hazardous Air Pollutants  
HCS = Hazard Communication Standard  
HMIS = Hazardous Materials Information System  
HVOC = High Volatile Organic Compound  
GHS = Globally Harmonized System of Classification and Labelling of Chemicals  
IARC = International Agency for the Research of Cancer  
IATA = International Air Transport Association  
IBC = Intermediate Bulk Container  
ICAO = International Civil Aviation Organization  
IMDG = International Maritime Dangerous Goods  
IMO = International Maritime Organization  
ITC = Interagency Testing Committee (TSCA)  
KOC = Organic Carbon/Water Partition Constant

LogPow = logarithm of the octanol/water partition coefficient  
LVOC = Low Volatile Organic Compound  
MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)  
MPPCF = Million Particles Per Cubic Foot  
N/A = Not Applicable  
NFPA = National Fire Protection Association  
NOEC = No Observable Effect Concentration  
NTP = National Toxicology Program  
OSHA = Occupation Safety & Health Administration  
PEL = Permissible Exposure Limit  
RCRA = Resource Conservation & Recovery Act  
RQ = Reportable Quantity  
RTK = Right-To-Know  
SARA = Superfund Amendments & Reauthorization Act  
STEL = Short-Term Exposure Limit  
TBD = To Be Determined  
TCC = Tagliabue Closed Cup  
TCLP = Toxicity Characteristic Leaching Procedure  
TDG = Transport of Dangerous Goods  
TLV = Threshold Limit Value  
TSCA = Toxic Substances Control Act  
TWA = Time Weighted Average  
UN = United Nations

**References** : Evaluation method used for mixture classification: Calculation method.

**Notice to reader**

**To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.**