

TAK Systems

SAFETY DATA SHEET

1. Identification

Product Identifier: DieHard
Recommended Use: Dental
Recommended Restriction: In accordance with manufacturers recommendations
Manufacturer/ Supplier: TAK Systems
Address: PO Box 939
East Wareham, MA 02538
Telephone: 508-295-9630
Website: www.taksystems.com

2. Hazard(s) Identification

GHS-US Classification

Flammable Liquid 2: H225

Eye Irritant 2A: H319

Label Elements

Hazard Symbol:



Signal Word:

Danger

Hazard Statement:

Highly Flammable liquid and vapor. May cause serious eye irritation. May cause drowsiness or dizziness.

Precautionary Statement:

Keep away from heat, hot surfaces, open flames, sparks. – No smoking. Keep container tightly closed. Take precautionary measures against static discharge. Avoid breathing mist, spray or vapors.

Preventions:

Take precautionary measures against static discharge. Avoid breathing mist, spray or vapors.

Response:

Wash exposed skin thoroughly after handling. Use in a well-ventilated area. Wear eye protection, face protection, protective clothing protective gloves. If on skin or hair remove or take off immediately all contaminated clothing. Rinse skin with water. If inhaled: Remove person to fresh air and keep comfortable for breathing. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a poison ;center if you feel unwell. If eye irritation persists Get medical advice and attention. In case of fire Use dry chemical powder, alcohol-resistant foam, carbon dioxide (CO2) for extinction

Storage:	Store in a well-ventilated place. Keep container tightly closed.
Disposal:	Dispose of contents/container to comply with local, state and federal regulations. Keep cool.
Hazard(s) not Otherwise Classified (HNOC):	None

3. Composition/Information on Ingredients:

Mixtures:

Chemical Name	CAS Number	%
DieHard	67-64-1	100

4. First Aid Measure

General:

Check the vital functions. Unconscious: maintain adequate airway and respiration. Respiratory arrest: artificial respiration or oxygen. Cardiac arrest: perform resuscitation. Victim conscious with labored breathing: half-seated. Victim in shock: on his back with legs slightly raised. Vomiting: prevent asphyxia/aspiration pneumonia. Prevent cooling by covering the victim (no warming up). Keep watching the victim. Give psychological aid. Keep the victim calm, avoid physical strain. Depending on the victim's condition: doctor/hospital

Inhalation:

Remove the victim into fresh air. Respiratory problems: consult a doctor/medical service.

Skin Contact:

Wash immediately with lots of water. Soap may be used. Do not apply (chemical) neutralizing agents. Remove clothing before washing. Take victim to a doctor if irritation persists.

Eye Contact:

Rinse immediately with plenty of water. Do not apply neutralizing agents. Take victim to an ophthalmologist if irritation persists.

Ingestion:

Rinse mouth with water. Immediately after ingestion: give lots of water to drink. Do not give milk/oil to drink. Do not induce vomiting. Give activated charcoal. Call Poison Information Center. Consult a doctor/medical service if you feel unwell. Ingestion of large quantities: immediately to hospital. Doctor: gastric lavage.

Most important Symptoms/effects, and Special Treatment Needed:

Not expected to present a significant hazard under anticipated conditions of normal use

5. Fire-Fighting Measures

Suitable Extinguishing Media:

Preferably: alcohol resistant foam. Water spray. Polyvalent foam. BC powder. Carbon dioxide.

Unsuitable Extinguishing Media: Specific Hazards Arising from The Chemical:

Solid water jet ineffective as extinguishing medium.

Gas/vapor flammable with air within explosion limits. Indirect fire hazard. may be ignited by sparks. Upon combustion: CO and CO₂ are formed. Violent to explosive reaction with many compounds. Reacts violently with (strong) oxidizers: peroxidation resulting in increased fire or explosion risk.

Special Protective Equipment And Precautions for Firefighters: Fire-fighting Equipment/Instruction:

Heat/fire exposure: compressed air/oxygen apparatus.

Cool with water spray and remove into safety. Physical explosion risk: extinguish/cool from behind cover. Do not move the load if exposed to heat. After cooling: persistent risk of physical explosion

6. Accidental Release Measures

Personal Precautions Protective Equipment:

Gloves. Protective goggles. Protective clothing. Large spills/in enclosed spaces: compressed air apparatus.

Emergency Procedures:

Keep upwind. Mark the danger area. Close doors and windows of adjacent premises. Stop engines and no smoking. No naked flames or sparks. Wash contaminated clothes.

Methods and materials for Containment and Cleaning up:

Take up liquid spill into inert absorbent material, e.g.: sand, earth, vermiculite. Scoop absorbed substance into closing containers. Spill must not return in its original container. Careful collect the spill/leftovers. Clean contaminated surfaces with an excess of water. Wash clothing and equipment after handling.

Environmental Precautions:

Prevent spreading in sewers.

7. Handling and Storage

Precautions for Safe Handling:

Comply with the legal requirements. Remove contaminated clothing immediately. Clean contaminated clothing. Handle uncleaned empty containers as full ones. Do not discharge the waste into the drains. Keep away from naked flames/heat. Keep away from ignitions sources/sparks. Avoid prolonged and repeated contact with skin. Keep container tightly closed. Work under local exhaust/ventilation.

Hygiene Measures:

Do not eat, drink or smoke when using this product. Wash contaminated clothing before reuse. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

Conditions for Safe Storage, Including any Incompatibilities:

Keep only in the original container in a cool, well ventilated place away from heat sources, direct sunlight, and incompatible materials. Keep container closed when not in use. Store in a cool area. Keep out of direct sunlight. Store in a dry area. Store in a dark area.

8. Exposure Controls/Personal Protection

Occupational Exposure Limits

US. OSHA

Components	Value	Form
OSHA PEL (TWA) (mg/m ³)	2400 mg/m ³	Liquid
OSHA PEL (TWA) (ppm)	1000 ppm	Liquid

US. ACGIH

Components	Value	Form
ACGIH TWA (ppm)	500 ppm	Liquid
ACGIH STEL (ppm)	750 ppm	Liquid

Appropriate Engineering Controls: Emergency eye wash fountains should be available in the immediate vicinity.

Individual Protection Measures, Such as Personal Protective Equipment:

Eye/Face Protection: Protective goggles

Skin Protection:

Hand Protection: Gloves

Other: Head/neck protection. Protective clothing.

Respiratory Protection: Wear gas mask with filter type A if conc. In air > exposure limit.

Other Information: Do not eat, drink or smoke during use.

9. Physical and Chemical Properties

Appearance

Physical State: Liquid

Form: Liquid

Color: Various

Odor:	Aromatic odor
Odor Threshold:	306 – 653 ppm 737 – 1574 mg/m ³
pH:	7
Freezing Point:	No data available
Boiling Point:	-95° C
Flash Point:	-18° C
Evaporation Rate:	6
Critical Temperature:	235° C
Self Ignition Temperature:	465° C hPa
Decomposition Temperature:	No data available
Vapor Pressure:	247
Vapor Density at 20° C:	2.0
Relative Density:	0.79
Solubility(ies)	
Solubility (water):	Nil
Solubility (Ethanol):	Nil
Solubility (Ether):	Nil
Viscosity Kinematic:	0.417 mm ² /s
Viscosity Dynamic:	0.00033 Pa.s
Explosive properties:	No data available
Oxidizing Properties:	None
Other Information	
Minimum Ignition Energy:	1.15 mJ
Specific Conductivity:	500000pS/m
Saturation Concentration:	589 g/m ³
VOX Content:	100%

10. Stability and Reactivity

Reactivity:	Upon combustion: CO and CO ₂ are formed. Violent to explosive reaction with many compounds. React violently with (strong) oxidizers. Peroxidation resulting in increased fire or explosion risk.
Chemical Stability:	Unstable on exposure to light
Possibility of Hazardous Reactions:	Not established.
Conditions to Avoid:	Direct sunlight. Extremely high or low temperatures.
Incompatible Materials:	Strong acids. Strong bases.

Hazardous Decomposition Products: Fume. Carbon monoxide. Carbon dioxide.

11. Toxicological Information:

Information on toxicological Effects

Acute Toxicity: Not classified
Skin Corrosion/Irritation: Not classified
Serious Eye Damage/Eye Irritation: May cause serious eye irritation.

Respiratory or Skin Sensitization

Respiratory Sensitization: Not classified

Skin Sensitization: Not classified

Germ Cell Mutagenicity: Not classified. Based on available data, the classification criteria are not met.

Carcinogenicity: Not classified

Specific Target Organ Toxicity- Single Exposure: May cause drowsiness or dizziness.

Repeated Exposure: Not classified. Based on available data, the classification criteria are not met.

Aspiration Hazard: Not classified. Based on available data, the classification criteria are not met.

Potential Adverse Human Health Effects & Symptoms: Based on available data, the classification criteria are not met.

Symptoms/Injuries After Inhalation: Exposure to high concentrations: Feeling of weakness. Irritation of the respiratory tract. Nausea. Vomiting Headache. Central nervous system depression. Dizziness. Narcosis Excited/restless. Drunkenness. Disturbed motor response. Respiratory difficulties. Disturbances of consciousness.

After Skin Contact: On continuous exposure/contact: Dry skin. Cracking of the skin.

After Eye Contact: Irritation of the eye tissue.

After Ingestion: Dry/sore throat. Risk of aspiration pneumonia. Symptoms similar to those listed under inhalation. After absorption of high quantities: Irritation of the gastric/intestinal mucosa. Change in the haemogramme/blood composition. Change in urine output. Affection of the renal tissue. Enlargement/affection of the liver.

Upon Intravenous Administration: Not available.

Chronic Symptoms: On continuous/repeated exposure/contact: Red skin. Skin rash/inflammation. Dry/sore throat. Headache. Nausea. Feeling of weakness. Loss of weight. Possible inflammation of the respiratory tract.

12. Ecological Information

Ecology - General:

Classification concerning the environment: not applicable.

Ecology - Air:

TA-Luft Klasse 5.2.5.

Ecology - Water:

Not harmful to fishes (LC50(96h) > 1000 mg/l). Not harmful to invertebrates (Daphnia). Not harmful to algae (EC50>1000 mg/l). Not harmful to plankton. Inhibition of activated sludge.

Persistence and Degradability:

Readily biodegradable in water. Biodegradable in the soil. Biodegradable in the soil under anaerobic conditions. No (test) data on mobility of the substance available.

Bioaccumulative Potential:

Not bioaccumulative.

Mobility in Soil:

0.0237 N/m

Other Adverse Effects:

Avoid release to the environment.

13. Disposal Considerations

Waste Disposal Recommendations:

Remove waste in accordance with local and/or national regulations. Hazardous waste shall not be mixed together with other waste. Different types of hazardous waste shall not be mixed together, if this may entail a risk of pollution or create problems for the further management of the waste. Hazardous waste shall be managed responsibly. All entities that store, transport or handle hazardous waste shall take the necessary measures to prevent risks of pollution or damage to people or animals. Recycle by distillation. Remove to an authorized waste incinerator for solvents with energy recovery. Do not discharge into drains or the environment.

Additional Information:

Hazardous waste according to Directive 2008/98/EC.

Ecology –Waste Materials:

Avoid release to the environment.

14. Transport Information

In accordance with DOT

UN-No (DOT):

1090

DOT NA no:

UN1090

DOT Proper Shipping Name:

DieHard

DOT Hazard Classes:

3 – Class 3 Flammable and combustible liquid 49 CFR 173.120.

: 3 - Flammable liquids



DOT Hazard Labels:

15. Regulatory Information

Classification According to Regulation (EC) No. 1272/2008 (CLP)

Flammable Liq 2 H225
Eye Irrit. 2 H319
Stot SE 3 H336
Full text of H-phrases: see section 16

Classification according to Directive 67/548/EEC or 1999/45/EC

F; R11
Xi; R36
R66
R67
Full text of R-phrases see section 16

US State Regulation:

No additional information available

16. Other Information, Including Date of Preparation or Last Revision

Issue Date:

December 1, 2015

Revision Date:

Version #:

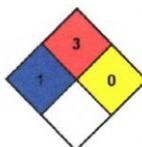
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Further Information:

None

Full Text of H Phrases:

Eye Irrit. 2A: Serious eye damage/eye irritation, Category 2A
Flam Liq 2 Flammable liquids, Category 2
Stot SE 3 Specific target organ toxicity – Single exposure, Category 3
H225 Highly flammable liquid and vapor.
H319 Causes serious eye irritation.
H336 May cause drowsiness or dizziness.



NFPA Symbol:

NFPA Health Hazard:

1 – Exposure could cause irritation but only minor residual injury even if no treatment is given.

NFPA Fire Hazard:

3 – Liquids and solids that can be ignited under almost all ambient conditions.

NFPA Reactivity:

0 – Normally stable, even under fire exposure conditions, and are not reactive with water.

HMIS III Rating:

Health:

1 Slight – Irritation or minor reversible injury possible.

Flammability:

3 Serious Hazard

Physical:

0 Minimal Hazard

Personal Protection:

C

Disclaimer:

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and shall not be considered a warranty or quality specification of any type. The information provided relates only to the specific material identified at the top of this SDS and may not be valid when the SDS material is used in combination with any other materials or in any process, unless specified in the text. Material users should review the information and recommendations in the specific context of their intended manner of handling, use, processing and storage including an assessment of the appropriateness of the SDS material in the user's end product, if applicable.