



SAFETY DATA SHEET

1. Identification

Product identifier FORMULA TS-5

Other means of identification

Product code TS-5

Recommended use Cured ink remover

Recommended restrictions None known.

Manufacturer/Importer/Supplier/Distributor information

Manufacturer

Company name	Tekmar	
Address	P.O Box 4700 Santa Barbara, CA 93140 United States	
Telephone	Product Stewardship	805-965-0704
	Transportation	800-564-1096
Website	http://tekmarltd.com/	
E-mail	techsupport@tekmarltd.com	
Emergency phone number	Chemtrec	800-424-9300
	Emergency Phone	805-965-0704
	International	++703 527-3887

Supplier Refer to Manufacturer

2. Hazard(s) identification

Tekmar TS-5 has no flash point and is non-flammable per OSHA and DOT regulations.

Appearance	Liquid
Color	Clear, Colorless.
Signal Word	Warning



Hazard Statements

H332 Harmful if inhaled.

H302 Harmful if swallowed.

H315 Causes skin irritation.

H 320 Causes eye irritation.

H336 May cause drowsiness or dizziness.

H412 Harmful to aquatic life with long lasting effects.

Precautionary Statements

P271 Use in a well-ventilated area.

P273 Avoid release to the environment.

P261 Avoid breathing vapor/spray.

P312 Call a POISON CENTER or doctor if you feel unwell.

P403 + P233 - Store in well-ventilated place. Keep container tightly closed.

Classification

Skin irritation	Category 2
Eye irritation	Category 2B
Specific target organ toxicity (single exposure)	Category 3 – (H332)
Ingestion (Acute Toxicity)	Category 4

Response

P308 + P313

IF EXPOSED or concerned: Get medical advice/attention

P305 + P351 + P338 + P337

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P337 + P313

If eye irritation persists, get medical advice/attention

P303 + P361 + P353 + P352

IF ON SKIN remove immediately all contaminated clothing.

P304+ P340

Wash with plenty of soap and water.

P332 + P313

If skin irritation occurs, get medical advice/attention

IF INHALED: Remove individual to fresh air and keep at rest in a position comfortable for breathing.

P306 + P361+ P363

ON CLOTHING: Remove immediately all contaminated clothing. Wash contaminated clothing before reuse.

3. Composition/information on ingredients

Mixtures

Chemical name	CAS number	%
1,2 trans-dichloroethylene	156-60-5	80 - 100
1,1,2,2-Tetrafluoroethyl-2,2,2-trifluoroethyl ether	406-78-0	5 - 20

The exact concentrations of the above listed chemicals are being withheld as a trade secret as allowed by 29CFR1910.1200.

4. FIRST AID MEASURES

Inhalation:	Move the exposed person to fresh air at once. Perform artificial respiration if breathing has stopped. Get medical attention if any discomfort continues.
Ingestion	Do not induce vomiting. Never give liquid to an unconscious person. Get medical attention if any discomfort continues.
Skin Contact	Remove contaminated clothing immediately and wash skin with soap and water. Get medical attention if any discomfort continues.
Eye Contact	Promptly wash eyes with plenty of water while lifting the eye lids. Continue to rinse for at least 15 minutes. Get medical attention if any discomfort continues.

5. FIRE FIGHTING MEASURES

Flash point (°C)	ASTM 56 – Does not flash
Extinguishing Media	Use extinguishing measures appropriate to local circumstances and surrounding materials.
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.
Hazardous combustion products	Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapors.
Special Fire Fighting Procedures	Avoid breathing fire vapors. Keep run-off water out of sewers and water sources. Dike for water control.
Protective Equipment For Fire-Fighters	Self contained breathing apparatus and full protective clothing must be worn in case of fire.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions	Wear protective clothing as described in Section 8 of this material safety data sheet.
Environmental Precautions	Do not discharge into drains, water courses or onto the ground. Contain spillages with sand, earth or any suitable adsorbent material.
Spill Clean Up Methods	Provide ventilation and confine spill. Do not allow runoff to sewer. Dam and absorb spillage with sand, sawdust or other absorbent. Collect spillage in containers, seal securely and deliver for disposal according to local regulations.

Reference to other sections For personal protection, see section 8. For waste disposal, see section 13

7. HANDLING AND STORAGE

Handling	Avoid spilling, skin and eye contact. Avoid inhalation of vapors and spray mists. In use, may form flammable/explosive vapor-air mixture.
Storage	Store in tightly closed original container in a dry, cool and well-ventilated place.

8. EXPOSURE CONTROL AND PERSONAL PROTECTION

COMPONENT	STD	TWA (8-hrs)	STEL (15 min)	Notes
1,2 trans-dichloroethylene	ACGIH	200 ppm TLV		

Protective Equipment



Process Conditions	Provide eyewash, quick drench.
Engineering Measures	Provide adequate general and local exhaust ventilation.
Respiratory Equipment	Suitable respiratory protection should be provided if used in confined or poorly ventilated spaces.
Hand Protection Eye Protection	Use suitable protective gloves if risk of skin contact. Wear approved safety goggles.
Hygiene Measures	Wash hands at the end of each work shift and before eating, smoking and using the toilet. Wash promptly with soap & water if skin becomes contaminated. When using do not eat, drink or smoke.
Skin Protection	Wear apron or protective clothing in case of splashes.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Liquid
Color	Colorless.
Initial boiling point and boiling range	30-42° C
Relative density	1.255 @ 25°C
Viscosity	0.41 cPs
Flash point	None. ASTM 56
Flammability Limits	LFL: 4.9 % UFL: 13.5 %

10. STABILITY AND REACTIVITY

Stability	Stable under normal temperature conditions and recommended use. Forms an azeotrope and will not flash.
Conditions To Avoid	Avoid heat, flames and other sources of ignition. Does not support combustion and will decompose when exposed to extreme conditions of heat at elevated temperatures, naked flames or incompatible materials.
Materials To Avoid	Strong oxidizing substances.
Hazardous Decomposition Products	Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapors.

11. TOXICOLOGICAL INFORMATION

No information available

12. ECOLOGICAL INFORMATION

Ecotoxicity	The product contains a substance which is harmful to aquatic organisms and which may cause long term adverse effects in the aquatic environment.
Degradability	No data available.
Bio-accumulative potential	No data available on bio-accumulation.
Mobility:	No information available.

13. DISPOSAL CONSIDERATIONS

Disposal Methods	Dispose of waste and residues in accordance with local authority requirements. Confirm disposal procedures with environmental engineer and local regulations. Do not allow runoff to sewer, waterway or ground.
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14. TRANSPORT INFORMATION

General	This product is not hazardous for transportation.
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15. REGULATORY INFORMATION

1,1,2,2-Tetrafluoroethyl-2,2,2-trifluoroethyl ether

US Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This compound is not subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

SARA 311/312 Hazard Categories

Acute Health Hazard	No
Chronic Health Hazard	No
Fire Hazard	No
Sudden release of pressure hazard	No
Reaction Hazard	No
CWA (Clean Water Act)	

This compound is not regulated as a pollutant pursuant to the Clean Water Act (40CFR 122.21 and

CERCLA

This compound is not regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA)(40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be reporting requirements at the local, regional or state level pertaining to releases of this compound.

US State Regulations

International Inventories

TSCA

DSL/NDSL

EINECS/ELINCS

ENCS

China inventory of existing chemical substances list inventory

Korea existing and evaluated chemical substances

ROHS

REACH

PICCS

NICNAS

Complies

Does not comply

Complies

Complies

Complies

Does not comply

Complies

Complies

Does not comply

Does not comply

16. OTHER INFORMATION

Only trained personnel should use this material. Since empty containers retain product residue, follow label warnings, even after container is emptied. For further Health and Safety information contact: Health and Safety Officer. Each user of this product should study this SDS carefully and consult appropriate expertise as necessary to become aware of and understand the data contained in this SDS and any hazards that may be associated with this product. The information provided in this Safety Data Sheet relates only to the specific material designated herein. The user is responsible for determining the conditions of safe use of this product and for complying with all Federal, State and Local governmental laws and regulations concerning its use. Technical Marketing Ltd d.b.a. TEKMAR makes no warranty, express or implied, including the warranty of merchantability and fitness for a particular purpose, and assumes no liability or responsibility for the accuracy, completeness, timeliness or usefulness of this information. Technical Marketing Ltd d.b.a. TEKMAR assumes no liability for any damages incurred, whether directly or indirectly, as a result of any errors, omissions or discrepancies in this information. Technical Marketing Ltd d.b.a. TEKMAR assumes no liability for reliance on this data and assumes no liability for damages related to the use or misuse of this product.

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