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TECH INTERNATIONAL **TECH CHEMICAL VULCANIZING FLUID**

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MATERIAL SAFETY DATA SHEET



SECTION 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: TECH CHEMICAL VULCANIZING FLUID
CATALOG NUMBER(S): 760 series, 761, 762, 763 series, 764IP, 765IP, 766IP, 767IP, 770
PRODUCT USE: RUBBER ADHESIVE

FOR CUSTOMER SERVICE INFORMATION, CONTACT:
TECH INTERNATIONAL, P.O. Box 486, Johnstown, OH, 43031-0486, USA
740-967-9015 or 800-433-8324 (fax - 740-967-3583)

EMERGENCY TELEPHONE NUMBER (24 hrs.): CHEMTREC North America (800) 424-9300 or (703) 527-3887
EMERGENCY TELEPHONE NUMBER (24 hrs.): CHEMTREC International (703) 527-3887

SECTION 2. COMPOSITION / INFORMATION ON HAZARDOUS INGREDIENTS

INGREDIENT (COMMON NAME)	CAS NO.	% (by wgt.)	OSHA PEL	ACGIH TLV	NIOSH REL	AIHA WEEL
Light Aliphatic Naphtha	64742-89-8	>93	500 ppm ¹	400 ppm (skin) ¹	86 ppm ¹	*
n-Ethylcyclohexylamine	5459-93-8	<1	*	*	*	*

EXPOSURE LIMITS ARE TIME WEIGHTED AVERAGES (TWA). SHORT-TERM EXPOSURE LIMITS (STEL) AND CEILING (C) ARE INCLUDED IF ESTABLISHED.

NOTES	
1	A complex stream of predominantly C5 to C10 hydrocarbons, exact composition varies. Occupational exposure limits based on limits for petroleum distillates/naphtha/rubber solvent.
*	Not Established.

SECTION 3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW:

Appearance & Odor: Light amber liquid, high viscosity. Strong solvent odor.

Health Hazards: May cause eye and skin irritation. Exposure to vapor or mist is possible. Can cause severe lung damage and may be fatal if swallowed. May cause CSN depression.

Physical Hazards: EXTREMELY FLAMMABLE. Do not use near open flame. Vapors are heavier than air and may travel along the ground and reach remote ignition sources causing a flashback fire danger.

R-PHRASES: R11 Highly Flammable.

S-PHRASES: S16 Keep away from sources of ignition-no smoking; S25 Avoid contact with eyes; S33 Take precautionary measures against static discharge; S51 Use only in well-ventilated areas

HAZARD SYMBOL: F+ Extremely Flammable

EYE CONTACT	Exposure to product may cause eye irritation. Symptoms include stinging, tearing, redness and swelling.
INHALATION	Exposure to vapor or mist is possible. The short-term inhalation toxicity is low. Breathing small amounts of vapors during normal handling is not likely to cause harmful effects; breathing large amounts may be harmful. Symptoms typically seen at air concentrations above the recommended exposure limits may include: irritation to nose, throat and respiratory system, metallic taste, muscle weakness. Initial central nervous system (CNS) excitation (euphoria, exhilaration, light-headedness) followed by CNS depression (dizziness, drowsiness, weakness, fatigue, nausea, headache, unconsciousness) and other CNS effects (confusion, impaired coordination, coma and possibly death).

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INGESTION	Single dose oral toxicity is low. Symptoms may include: gastrointestinal irritation (nausea, vomiting, diarrhea), CNS depression.
SKIN CONTACT	Exposure may cause mild skin irritation. Prolonged or repeated exposure may dry skin. Symptoms include: redness, burning, drying, cracking and skin burns.
TARGET ORGANS EFFECTED	The following organs and/or organ systems may be damaged by overexposure to this material: Heart, Auditory System

CARCINOGENICITY - LISTED BY:

ACGIH	No	IARC	No	NTP	No	OSHA	No
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SECTION 4. FIRST AID MEASURES

EYE CONTACT	Flush eyes with water for at least 20 minutes while holding eyelids apart. If redness, blurred vision, or swelling persist, seek medical attention.
INHALATION	If symptoms develop, immediately move individual away from exposure and into fresh air. Seek immediate medical attention. If person is not breathing, begin artificial respiration. If breathing is difficult, administer oxygen. Keep person warm and quiet.
INGESTION	If swallowed, DO NOT induce vomiting. Have victim rinse mouth out with water. This material is an aspiration hazard. If person is drowsy or unconscious, place on left side with head down and seek immediate medical attention. In general no treatment is necessary unless large quantities are swallowed, however get medical advice. If any of the following delayed signs and symptoms appear within the next 6 hours, transport to the nearest medical facility: fever greater than 101° F, shortness of breath, chest congestion or continued coughing or wheezing. If vomiting occurs spontaneously, keep head below hips to prevent aspiration.
SKIN CONTACT	Remove contaminated clothing. Wash exposed area with soap and water. Launder contaminated clothing before reuse. If symptoms persist, seek medical attention.
NOTE TO PHYSICIAN	Light hydrocarbons like this one have been associated with cardiac sensitization in abuse situations. Hypoxia or the injection of adrenaline-like substances enhances these effects. Refer to Section 3.

SECTION 5. FIRE FIGHTING MEASURES

FLASH POINT AND METHOD	20.0 ° F (-6.7 ° C)
LEL	1.1%
UEL	7.5 %
EXTINGUISHING MEDIA	Foam, carbon dioxide or dry chemical
SPECIAL FIREFIGHTING PROCEDURES	Wear self-contained breathing apparatus with a full facepiece operated in the positive pressure demand mode when fighting fires.
UNUSUAL FIRE AND EXPLOSION HAZARDS	Never use a welding or cutting torch on or near container (even when empty) because product (even just residue), can ignite explosively. All 5-gallon or larger metal containers should be grounded and bonded when material is being transferred. Vapors are heavier than air and may travel along the ground or may be moved by ventilation and ignited by pilot lights, other flames, sparks, heaters, smoking or other ignition sources distant from the material handling point.

SECTION 6. ACCIDENTAL RELEASE MEASURES

EXTREMELY FLAMMABLE Vapors are flammable and heavier than air. Vapors may travel across the ground and reach remote ignition sources causing a flashback fire danger.

SMALL SPILL	Eliminate all sources of ignition (flames, pilot lights, electrical sparks) and absorb material on vermiculite, floor absorbent or other absorbent material.
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LARGE SPILL	<p>Stay upwind and keep out of low areas. Handling equipment must be bonded and grounded to prevent sparking. Eliminate all sources of ignition (flames, pilot lights, electrical sparks, etc.). Persons not wearing appropriate protective equipment should be excluded from area of spill until cleanup has been completed. Stop spill at source. Prevent from spreading by using dikes, booms, etc. If runoff occurs, notify authorities as required.</p> <p>Use water spray (fog) to reduce vapors or divert vapor cloud drift. If vapor cloud forms, use water fog to suppress or blanket spill area with foam. Remove with vacuum trucks or pump to storage/salvage vessels. Soak up residue with an absorbent such as clay, sand or other suitable material and dispose of properly. Flush area with water to remove trace residue. Contain run-off from residue, flush and dispose of properly. Prevent entry into waterways, sewer, basements or confined areas. Remove contaminated soil to remove contaminated trace residues. Dispose of in same manner as material. For small spills: Soak up residue with an absorbent such as clay, sand or other suitable material. Place in non-leaking container and seal tightly for proper disposal</p>
REPORTING:	<p>This material is covered by EPA's Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) Petroleum Exclusion. Therefore, releases to the environment may not be reportable under CERCLA. Notify authorities if any exposures to the general public or environment occurs or is likely to occur.</p>
DISPOSAL:	<p>Proper disposal should be evaluated based on regulatory status of this material (refer to Section 13), potential contamination from subsequent use and spillage, and regulations governing disposal in the local area.</p>

SECTION 7 HANDLING AND STORAGE

Do not taste or swallow. Avoid contact with eyes, skin and clothing. Avoid prolonged contact. Wash thoroughly after handling.

HANDLING:	<p>Surfaces that are sufficiently hot may ignite liquid material. Vapors are flammable and heavier than air. Vapors may travel across the ground and reach remote ignition sources causing a flashback fire danger.</p> <p>Keep away from heat, sparks and flame. Extinguish pilot lights, cigarettes and turn off other sources of ignition prior to use and until all vapors have dissipated. Use explosion-proof ventilation to prevent vapor accumulation while in use. Properly dispose of any contaminated rags or cleaning materials in order to prevent fires. Wash with soap and water before eating, drinking, smoking, applying cosmetics, or using toilet facilities. Launder contaminated clothing before reuse. Air-dry contaminated clothing in a well ventilated area before laundering.</p> <p>Static electricity may accumulate and create a fire hazard. Bond and ground handling equipment and transfer containers to prevent sparking.</p>
STORAGE:	<p>Keep away from ignition sources. Store in approved flammable cabinet, building, or area. Ground fixed equipment. Store large quantities in buildings designed for storage of NFPA Class 1-B flammable materials.</p>
CONTAINER WARNINGS	<p>Empty containers can contain explosive vapors. Do not cut, drill, grind, weld or perform similar operations on or near containers.</p>

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

See Section 2. for Occupational Exposure Limits.

EYE PROTECTION	<p>Chemical splash goggles in compliance with OSHA regulations are advised, however OSHA regulations also permit other types of safety glasses. Consult your safety equipment representative.</p>
RESPIRATORY PROTECTION	<p>If workplace exposure limit (s) of product or any component is exceeded (See Section 2), a NIOSH/MSHA approved respirator is advised in the absence of proper environmental control. OSHA regulations permit other NIOSH/MSHA approved respirators (negative pressure type) under specified conditions (consult your industrial hygienist). Engineering or administrative controls should be implemented to reduce exposure.</p>
SKIN PROTECTION	<p>Wear resistant gloves, such as: polyvinyl alcohol, nitrile.</p>
ENGINEERING CONTROLS	<p>Provide sufficient mechanical (general or local exhaust) ventilation to maintain exposure below OEL(s). Explosion-proof ventilation system is acceptable.</p>
OTHER PROTECTIVE EQUIPMENT	<p>To prevent repeated or prolonged skin contact, wear impervious clothing and boots.</p>

**MATERIAL SAFETY DATA SHEET****OTHER HYGIENIC AND
WORK PRACTICES**

Use good personal hygiene work practices. Wash hands before eating, drinking, smoking or using toilet facilities. Promptly remove soiled clothing and wash before reuse.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

INITIAL BOILING POINT	209 - 230 ° F (98.3 - 110 ° C) @ 760.00 mm Hg
VAPOR PRESSURE	38 mm Hg @ 68 ° F (20 ° C)
VAPOR DENSITY (air = 1)	3.30
SPECIFIC GRAVITY (water = 1)	0.75 @ 60.00 ° F
% VOLATILES	93.9%
VOC CONTENT	5.77 lbs./gal (696.6 g/L)
EVAPORATION RATE	3.2 (n-Butyl Acetate = 1)
pH	Not Established
APPEARANCE	Light amber liquid, high viscosity
ODOR	Strong solvent

SECTION 10. STABILITY AND REACTIVITY

STABILITY	Stable
HAZARDOUS POLYMERIZATION	Cannot occur
INCOMPATIBILITY (materials or conditions to avoid)	Strong oxidizers, strong acids
HAZARDOUS DECOMPOSITION PRODUCTS	Carbon dioxide, carbon monoxide, various hydrocarbons

SECTION 11. TOXICOLOGICAL INFORMATION

No data is specifically available for this product and therefore this toxicological information is based on testing completed with ingredients

ACUTE TOXICITY

MATERIAL TESTED	EFFECTS	TEST RESULTS
Hydrocarbon Solvent Blend	Inhalation - LC50	15,000 ppm (Rat 4-hours)
Solvent Naphtha, Light Aliphatic	Dermal - LD50	>2.64 g/kg (Rat)
Solvent Naphtha (Petroleum), Light Aliphatic	Oral - LD50	>7.1 g/kg (Rat)
ETHYLCYCLOHEXYLAMINE - Acute:	ACUTE ORAL TOXICITY (LD50, RAT) 377.00 mg/kg ACUTE DERMAL TOXICITY (LD50, RABBIT) 750.00 mg/kg ACUTE INHALATION TOXICITY (LC50, RAT) No Data OTHER ACUTE EFFECTS No Data IRRITATION EFFECTS DATA Corrosive to the skin of a rabbit.	
ETHYLCYCLOHEXYLAMINE - Chronic:	CHRONIC/SUBCHRONIC DATA No delayed, subchronic or chronic test data are known.	

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EYE IRRITATION: Minimal irritation (Rabbit). Material Tested - Hydrocarbon Solvent Blend

SKIN IRRITATION: Minimally irritating. Material Tested - Hydrocarbon Solvent Blend

REPEAT DOSE TESTING: While there is no evidence that industrially acceptable levels of light hydrocarbon vapors (the occupational exposure limit) have produced cardiac effects in humans, animal studies have shown that inhalation of high levels produced cardiac sensitization. Such sensitization may cause fatal changes in heart rhythms, which was shown to be enhanced by hypoxia or the injection of adrenaline-like substances.

NUROTOXICITY: Prolonged and repeated exposures to high concentrations of some volatile hydrocarbon solvents have resulted in hearing loss in rats. Solvent abusers and noise interaction with these solvents in the work environment may cause symptoms of hearing loss.

MUTAGENICITY: Some effects to chromosomes but no mutagenic effects were observed in genotoxicity studies conducted for similar hydrocarbon solvent mixtures. The biological significance of the chromosomal findings is unknown.

OTHER INFORMATION: Kidney effects in male rats were observed in laboratory animals exposed to a similar material. Effects were consistent with male rat hyaline droplet nephropathy, which is of questionable significance to human health.

SECTION 12. ECOLOGICAL INFORMATION

This formulation has not been tested for environmental effects. This section will be updated as ecological reviews are completed.

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal of material should be done in accordance with all Federal (40 CFR Part 261 in USA), State and Local environmental control regulations. If disposed of in its unused form, this material is a D001 Ignitable Characteristic Hazardous Waste (US). Destroy by incineration in accordance with applicable regulations.

SECTION 14. TRANSPORTATION INFORMATION (DOT/IATA/IMDG: transport information may vary with the container size, packaging and mode of shipment - See notes)

DOT PROPER SHIPPING NAME (49 CFR 172.101)	Petroleum Distillates, N.O.S.
HAZARD CLASS (DOT, IATA, IMO)	3
ID NUMBER	UN 1268
PACKING GROUP	II
ADDITIONAL DESCRIPTION	(NOT REQUIRED) Petroleum Naphtha
LABELS REQUIRED	Flammable Liquid (49 CFR 172.419)
NORTH AMERICAN EMERGENCY RESPONSE GUIDEBOOK NUMBER	128
EmS NUMBER	3-07

NOTE: 1 Qt (1L) containers may be shipped as a Consumer Commodity, (ORM-D Domestic US).
1 Qt (1L) containers may be shipped as Limited Quantity of Dangerous Goods of Class 3.
See DOT, IATA and IMDG Regulations before shipping any hazardous material.

SECTION 15. REGULATORY INFORMATION**FEDERAL REGULATIONS (USA)**

This product is hazardous according to OSHA 29 CFR 1910.1200

**MATERIAL SAFETY DATA SHEET**

This product may contain toxic substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act (Emergency Planning and Community Right-To-Know Act) of 1986 and of 40 CFR Part 372. The following materials may be present in this product at the listed concentrations (% by wgt):

n-heptane *	CAS # 142-82-5	14 - 30%
n-Ethylcyclohexylamine	CAS # 5459-93-8	< 1.0 %
toluene *	CAS # 108-88-3	<0.2 %
n-hexane *	CAS # 110-54-3	<0.1 %
benzene *	CAS # 71-43-2	<0.1 %

* These constituents(s) of this Light Aliphatic Naphtha are naturally present and have not been added as ingredients.

TOXIC SUBSTANCES CONTROL ACT:

The chemical substances in this product are listed on the TSCA Section 8 Chemical Substance Inventory List (40 CFR Part 710).

SARA TITLE III:

SARA Hazard Categories (311/312): P3 Fire Hazard. H1 Immediate (Acute) Health Hazard. H2 Delayed (Chronic) Health Hazard.

EPA - CLEAN WATER ACT (CWA). Spills entering surface waters or any watercourses or sewers entering/leading to surface waters that cause a sheen must be reported to the National Response Center, 800-424-8802. Keep out of surface waters and any watercourses or sewers entering or leading to surface waters. This material is covered by the CERCLA Petroleum Exclusion, therefore, releases to air, land or water are not reportable under EPA-CERCLA ("SUPERFUND").

STATE REGULATIONS (USA)

This product contains the following substances specifically listed by individual states; other product specific health and safety data in other sections of the MSDS may also be applicable for state requirements. For details on state regulatory requirements contact the appropriate state agency.

California, New Jersey, Florida, Pennsylvania, Minnesota, and Massachusetts have or may have the following chemical(s) on their Right-To-Know Chemical List:

Heptane (142-82-5) * 14 - 30% by weight
Toluene (108-88-3) * <0.2% by weight

* These are naturally present constituents(s) of this Light Aliphatic Naphtha and have not been added as ingredients.

CALIFORNIA SAFE DRINKING WATER AND TOXIC ENFORCEMENT ACT (Proposition 65):

Toluene (108-88-3) <0.2% by weight CA_65R

CA_65R - This product contains toluene, a chemical known to the State of California to cause reproductive toxicity.

INTERNATIONAL REGULATIONS**INVENTORY STATUS(components):**

LIGHT ALIPHATIC NAPHTHA: Listed on the following international inventories: AICS (AUSTRALIA), DSL (CANADA), ECL (SOUTH KOREA), EINECS (EUROPE), PICCS (PHILIPPINES), and the Inventory of Existing Chemical Substances (China).

ETHYLCYCLOHEXYLAMINE: Listed on the following international inventories: AICS (AUSTRALIA), MITI (JAPAN), PICCS (PHILIPPINES), EUROPEAN ECONOMIC COMMUNITY (EEC) EINECS/ELINCS MASTER INVENTORY- Included on EINECS inventory or polymer substance, monomers; included on EINECS inventory or no longer polymer.

Not listed on the following international inventories: DSL (CANADA), ECL (KOREA), and SEPA (CHINA).
Ethylcyclohexylamine is listed on the NDSL (CANADA)

CANADA:

WHMIS HAZARD CLASSIFICATION: Class B Division 2, Class D2B Other Toxic Effects - Skin Irritant

This product has been classified in accordance with the hazard criteria of the CPR and the MSDS contains all the information required by the CPR. WHMIS SYMBOLS: B Flammable; D Toxic



**MATERIAL SAFETY DATA SHEET****SECTION 16. OTHER INFORMATION****NFPA and HMIS RATINGS**

HEALTH	1	FLAMMABILITY	3	REACTIVITY	0
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MSDS No.: 760**Revision#: 6****Revision Date: 07/2/2002**

Revisions since last change (discussion): This MSDS has been revised to meet the requirements of the following standards: EEC Directive 2001/58/EC (91/155/EEC), ANSI Z400.1-1993 and Canadian WHMIS. There are no changes to the health, safety, precautionary data, or regulatory data. We do, however, encourage you to take the opportunity to reread the sheet and review the information. This MSDS complies with the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Prepared by: Tech International Environmental Health and Safety Department

The information contained herein is based on data from our raw material suppliers and other sources and is believed to be accurate. This information is provided in compliance with national and local regulations, where applicable, to give warning of actual and assumed hazards, and to inform of generally applicable precautions and control measures which are known to Tech International. Tech International makes no warranty or representation that the information is accurate, reliable, complete or representative and the Buyer may rely on thereon only at Buyer's own risk. Tech International warrants only that it has made no effort to censor, other than trade secret information, or to conceal hazards of its products.

It is the responsibility of the user to comply with all applicable Federal, State and Local laws and regulations.

For 24-hour access to Tech International MSDS documents:

- In North America call our Fax-on-Demand system at 888-612-8324, ext. 8324 (TECH).
- Outside North America call the international dialing code for the United States followed by 740 363-7715, ext. 8324. Then follow the instructions to leave a message with the requested document numbers and the country, city code and fax number.
- Also see www.techtirerepairs.com for latest MSDSs and instructions for fax-on-demand service.