



Material Safety Data Sheet

Product No. T-2 Compound "A" & T-2 Compound "B"

1. CHEMICAL PRODUCT & COMPANY IDENTIFICATION

Product Name: REMA T-2 A & B COMPOUND

Product Use: Filler rubber

Manufacturer: REMA TIP TOP/NO. AMERICA, 119 Rockland Avenue, Northvale, NJ 07647

24-Hour Emergency Phone Number: North America: 800-424-9300 (CHEMTREC)
International: 703-527-3887 (CHEMTREC) Collect Calls Accepted

2. PRODUCT INGREDIENTS

<u>CHEMICAL NAME:</u>	<u>CAS NUMBER:</u>	<u>% RANGE:</u>	<u>OSHA PEL:</u>
* Trichloroethylene	79-01-6	30-50%	100 ppm TWA
Carbon Black	1333-86-4	5-10%	3.5 mg/m ³ TWA

Balance of ingredients not rated as hazardous as defined in 29 CFR 1910.1200

* Denotes chemical subject to reporting requirements of Section 313 of Title III of the 1986 Superfund Amendments and Reauthorization Act (SARA) and 40 CFR Part 372

3. HAZARDS IDENTIFICATION

POTENTIAL HEALTH EFFECTS:

EYE: Product in eyes produces pain and irritation with mild temporary damage possible. Vapor can irritate eyes.

SKIN: Prolonged or repeated contact with product can cause irritation, defatting of skin and dermatitis. Absorption of product through intact skin is possible, causing systemic poisoning, but this is an unlikely route of significant toxic exposure.

INGESTION: Single dose oral toxicity is considered to be low. Small amounts swallowed incidental to normal handling operations are not likely to cause injury; swallowing amounts larger than that may cause injury. If aspirated (liquid enters the lung), may be rapidly absorbed through the lungs and result in injury to other body systems.

INHALATION: Inhalation is the major potential route of exposure. Exposure to high concentrations of vapor or mist can cause central nervous system depression with symptoms of headache, dizziness, stupor, loss of consciousness or death depending on concentration and duration of exposure. Exposure to high concentrations can cause irregular heartbeat, cardiac arrest and death. Overexposure has been shown to cause adverse effects on the liver, nervous system and other internal organs.



Material Safety Data Sheet

Product No. T-2 Compound "A" & T-2 Compound "B"

SYSTEMIC (OTHER TARGET ORGANS): The main ingredient of this product, Trichloroethylene, is reported to have caused hearing loss in lab animals upon repeated exposure of 2500 ppm or higher. Repeated exposure may cause central or possibly even peripheral nervous system effects; high levels have caused liver or kidney effects in lab animals.

CANCER INFORMATION: For Hazard Communication purposes, under OSHA Standard 29 CFR Part 1910.1200, the main ingredient of this product, Trichloroethylene, is listed as a potential carcinogen by IARC. Tumors were observed in mice given large doses of Trichloroethylene (TCE). A very low incidence of tumors has been observed in male rats at high levels of TCE, which caused reduced survival, rendering these studies inadequate. Data suggest a nongenotoxic mechanism for tumor formation that implies that nontoxic doses of TCE should pose little or not carcinogenic hazard. Human data have not established an association between TCE exposure and cancer. TCE is not believed to pose a measurable carcinogenic risk to man when handled as recommended.

Carbon Black is listed as a Group 2B, Possibly Carcinogenic to Humans, by IARC; A4, Not Classifiable as a Human Carcinogen by ACGIH; and as a potential occupational carcinogen (in presence of polycyclic aromatic hydrocarbons) by NIOSH.

TERATOLOGY (BIRTH DEFECTS): May cause genetic damage, based on animal information.

REPRODUCTIVE EFFECTS: May cause birth defects, based on animal information.

4. FIRST AID

EYES: Irrigate with flowing water immediately and continuously for 15 minutes while frequently lifting the upper and lower eyelids. If irritation persists, consult medical personnel.

INGESTION: Do not induce vomiting. Call a physician and/or transport to emergency facility immediately.

SKIN: Wash off in flowing water or shower. Wash contaminated clothing before reuse. If irritation persists, consult medical personnel.

INHALATION: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, qualified personnel should administer oxygen. Call a physician or transport to medical facility.

NOTE TO PHYSICIAN: Chlorinated hydrocarbons may sensitize the heart to epinephrine and other circulating catecholamines so that arrhythmias may occur. Careful consideration of this potential adverse effect should precede administration of epinephrine or other cardiac stimulants and the selection of bronchodilators.

5. FIRE FIGHTING MEASURES

FLAMMABLE PROPERTIES: Flash Point > 200°F (93°C) Method used – TOC, TCC & COC.
Autoignition Temperatures - 770°F (410°C).

FLAMMABLE LIMITS: LFL = 8% @ 212°F (100°C); 8% @ 77°F (25°C);
UFL = 44.8% @ 212°F (100°C); 10.5% @ 77°F (25°C).



Material Safety Data Sheet

Product No. T-2 Compound "A" & T-2 Compound "B"

HAZARDOUS COMBUSTION PRODUCTS: During a fire, smoke may contain the original material in addition to unidentified toxic and/or irritating compounds. Hazardous combustion products may include and are not limited to hydrogen chloride. Hazardous combustion products may include trace amounts of phosgene, chlorine.

EXTINGUISHING MEDIA: Water fog or fine spray. Carbon dioxide chemical. Foam. Water fog, applied gently may be used as a blanket for fire extinguishment.

FIRE FIGHTING INSTRUCTIONS: Keep people away. Isolate fire area and deny unnecessary entry. Contain fire run-off if possible. Fire water run-off, if not contained may cause environmental damage. Use water spray to cool fire exposed containers and fire affected zone until fire is out and danger of reignition has passed. Immediately withdraw all personnel from area in case of rising sound from venting safety device or discoloration of the container. Move container from fire area if this is possible without hazard. Stay upwind. Keep out of low areas where gases (fumes) can accumulate. Eliminate ignition source.

PROTECTIVE EQUIPMENT FOR FIRE FIGHTERS: Wear positive-pressure self-contained breathing apparatus (SCBA) and protective fire fighting clothing (includes fire fighting helmet, coat, pants, boots and gloves). If protection equipment is not available or not used, fight fire from a protected location or safe distance.

6. ACCIDENTAL RELEASE MEASURES

In case of accidental release of a large volume of this product, clear all personnel from area. Do not breathe vapors. Ventilate area of leak or spill. Wear protective equipment including positive pressure self-contained or air supplied breathing apparatus. Follow confined space entry procedures if applicable, ASTM D-4276 and OSHA 29CFR 1910.146. Contain product to prevent contamination of soil, surface water or groundwater. Material is heavier than water and has limited water solubility. It will collect on the lowest surface. For large spills; contain product; transfer to properly labeled closed metal containers. For small spills: mop or soak up immediately. Place in properly labeled metal containers. Notify National Response Center (800-424-8802) of uncontained releases to the environment in excess of the Reportable Quantity (RQ). For all transportation accidents, call CHEMTREC at 800-424-9300.

7. HANDLING & STORAGE

HANDLING: Very large quantities of these packages, if mishandled, may accumulate enough liquid or vapor to cause a harmful atmosphere; however, the probability of this type of release is quite small. If large numbers of these containers are opened, releasing the contents, evacuate the area and call for emergency personnel.

STORAGE: Keep packaged in original, labeled containers until use. Store in cool, dry place. Do not store in aluminum, zinc, aluminum alloys and plastic containers. Do not remove or deface label. Prevent water or moist air from entering containers. Do not reuse container without recycling or reconditioning in accordance with any applicable Federal, State or local laws. Do not use cutting or welding torches, open flames, or electric arcs on empty or full containers.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS

Provide general and/or local exhaust ventilation to control airborne levels to below exposure guidelines.



Material Safety Data Sheet

Product No. T-2 Compound "A" & T-2 Compound "B"

PERSONAL PROTECTIVE EQUIPMENT

EYE/FACE PROTECTION: Wear safety goggles with side shields. Contact lenses should not be exposed. If vapor exposure causes eye discomfort, use a full-face respirator.

SKIN PROTECTION: Wear solvent-resistant gloves such as Viton, polyvinyl alcohol, or equivalent.

RESPIRATORY PROTECTION: Atmospheric levels should be maintained below the exposure guideline. In the unlikely event where vapor concentration exceeds or is likely to exceed the OSHA PEL, a NIOSH-approved, continuous flow supplied air-respirator, hood or helmet is acceptable. A NIOSH approved self-contained breathing apparatus or supplied-air respirator, with full-face piece, is required for vapor concentrations exceeding exposure limits. A NIOSH approved self-contained positive pressure breathing apparatus, with full facepiece, is required for spills and/or emergencies. For emergencies in confined or poorly ventilated areas, call for properly trained emergency personnel.

EXPOSURE GUIDELINE(s): PREMA PRODUCTS recommends that its customers minimize employee exposure. PREMA therefore suggests that its customers consider adopting the lower of the current OSHA PEL or the ACGIH TLV's for the purpose of evaluating employee exposures. The TLV's recommended by the ACGIH have been updated on a continuing basis.

Trichloroethylene:

ACGIH TLV (8 hr) is 50 ppm; 100 ppm STEL. OSHA PEL is 100 ppm (8hr) TWA; 200 ppm Ceiling. ACGIH Biological Exposure Indices: Blood = 4 mg/L; Urine = 100 mg/g creatinine.

The following Provincial Exposure Limits apply in Canada: Alberta: 50 ppm TWA; 269 mg/m³ TWA; 100 ppm STEL; 537 mg/m³ STEL; British Columbia: 50 ppm TWA; 269 mg/m³ TWA; 100 ppm STEL; 537 mg/m³ STEL; Manitoba: 50 ppm TWA; 270 mg/m³ TWA; 200 ppm STEL; 1080 mg/m³ STEL; New Brunswick: 50 ppm TWA; 269 mg/m³ TWA; 100 ppm STEL; 537 mg/m³ STEL; NW Territories: 100 ppm TWA; 537 mg/m³ TWA; 150 ppm STEL; 806 mg/m³ STEL; Nova Scotia: 50 ppm TWA; 100 ppm STEL; Nunavut: 100 ppm TWA; 537 mg/m³ TWA; 150 ppm STEL; 806 mg/m³ STEL; Ontario: 50 ppm TWA; 100 ppm STEV; Quebec: 50 ppm TWA; 269 mg/m³ TWA; 200 ppm STEV; 1070 mg/m³ STEV; Saskatchewan: 269 mg/m³ TWA; 50 ppm TWA; 537 mg/m³ STEL; 100 ppm STEL; Yukon: 100 ppm TWA; 535 mg/m³ TWA; 150 ppm STEL; 800 mg/m³ STEL

Carbon Black:

ACGIH: 3.5 mg/m³ TWA; OSHA: 3.5 mg/m³ TWA; NIOSH: 3.5 mg/m³ TWA, 0.1 mg/m³ TWA (as PAH, carbon black in presence of polycyclic aromatic hydrocarbons);

The following Provincial Exposure Limits apply in Canada: Alberta: 3.5 mg/m³ TWA; British Columbia: 3.5 mg/m³; Manitoba: 3.5 mg/m³ TWA; New Brunswick: 3.5 mg/m³ TWA; NW Territories: 3.5 mg/m³ TWA; Nova Scotia: 3.5 mg/m³ TWA; Nunavut: 3.5 mg/m³ TWA; Ontario: 3.5 mg/m³ TWA; Quebec: 3.5 mg/m³ TWA; Saskatchewan: 3.5 mg/m³ TWA; Yukon: 3.5 mg/m³ TWA.



Material Safety Data Sheet

Product No. T-2 Compound "A" & T-2 Compound "B"

9. PHYSICAL & CHEMICAL PROPERTIES

APPEARANCE: Black / Beige

ODOR: Narcotic type odor.

BOILING POINT: 187°F (86°C)

SOLUBILITY IN WATER: 1.1 g/L.

SPECIFIC GRAVITY: 1.45 @ 77°F (25°C)

VAPOR PRESSURE: 77 mbar @ 68°F (20°C)/208 mbar @ 122°F (50°C)

% VOLATILE BY VOLUME: 82%

LOWER FLAMMABILITY LIMIT: 8%

DECOMPOSITION TEMPERATURE: >120 °C (248°F)

IGNITION TEMPERATURE: 410°C (770°F)

10. STABILITY & REACTIVITY

INCOMPATIBILITY WITH OTHER MATERIALS: Product is stable under recommended storage conditions. Materials to avoid are strong alkalis, oxidizers, aluminum powder, alkaline earth metals, barium, lithium, magnesium and titanium. Avoid open flames and welding arcs, which can cause thermal degradation.

HAZARDOUS POLYMERIZATION: Will not occur.

DECOMPOSITION PRODUCTS: Hazardous decomposition products may include and are not limited to hydrogen chloride and trace amounts of chlorine and phosgene (Intense heat of fire)

11. TOXICOLOGICAL INFORMATION

ACUTE TOXICITY

INHALATION: 200 ppm causes mild eye irritation. 400 ppm causes slight eye irritation and minimal light-headedness after 3 hours. 1,000-1,200 ppm after 6 minutes causes eye and nasal irritation, light-headedness and dizziness. 2,000 ppm cannot generally be tolerated, is irritating to the eyes and respiratory tract and causes drowsiness, dizziness and nausea within 5 minutes. Ventricular arrhythmias and very rapid respiration have been observed in individuals exposed to 15,000 ppm. High concentrations or prolonged overexposure can cause unconsciousness and death.



Material Safety Data Sheet

Product No. T-2 Compound "A" & T-2 Compound "B"

CHRONIC TOXICITY

Chronic overexposure to the ingredient Trichloroethylene has caused toxic effects in the liver, lymphatic system (one species), kidney and cardiovascular system of experimental animals. Humans exposed to Trichloroethylene can become intolerant to ethyl alcohol, with small quantities causing inebriation and skin blotches. Reports have been published associating increased incidences of scleroderma (systemic sclerosis) with exposure to Trichloroethylene. The finding of chronic toxic effects in lab animals may indicate toxicity to humans. Overexposure should be avoided; failure to do so could result in illness, injury or even death depending on the level and duration of exposure.

12. DISPOSAL CONSIDERATIONS

DISPOSAL: Do not dump into any sewers, on the ground, or into any body of water. All disposal methods must be in compliance with all Federal, State/Provincial and local laws and regulations. Regulations may vary in different locations. Waste characterizations and compliance with applicable laws are the responsibility of the waste generator.

UNUSED & UNCONTAMINATED PRODUCT: The preferred options include sending to a licensed, permitted recycler, reclaimer, incinerator or other thermal destruction device.

13. TRANSPORT INFORMATION

DOT INFORMATION:

SHIPPING DESCRIPTION (49 CFR 172.101): Trichloroethylene mixture, 6.1, UN 1710, PG III, RQ

PLACARD (WHEN REQUIRED): POISON, 6

SHIPPING LABEL (WHEN REQUIRED): POISON

EXCEPTIONS: DOT Paragraphs 172.153 & 172.102

ALTERNATE SHIPPING ARRANGEMENTS: Based on package or shipping container size, this product may be shipped as a, "Limited Quantity", or, renamed, "Consumer Commodity" and reclassified as, "ORM-D" Material.

TDG INFORMATION: Trichloroethylene mixture, 6.1, UN 1710, PG III

IMO REQUIREMENTS: EmS No. = F-A, S-A IMDG Code Page: Vol. 2, Pg. 80

ICAO/IATA: 6.1

14. REGULATORY INFORMATION

NOTICE: The information herein is presented in good faith and believed to be accurate as of the effective date shown above. However, no warranty, express or implied is given. Regulatory requirements are subject to change and may differ from one location to another. It is the buyer's responsibility to ensure that its activities comply with Federal, State or provincial, and local laws. The following specific information is made for the purpose of complying with numerous laws and regulations.



Material Safety Data Sheet

Product No. T-2 Compound "A" & T-2 Compound "B"

US FEDERAL REGULATIONS

SARA 313 INFORMATION: Components identified with an asterisk (*) in Section 2 are subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372.

SARA HAZARD CATEGORY: This product has been reviewed according to the EPA "Hazard Categories" promulgated under Sections 311 and 312 of SARA Title III and is considered, under applicable definitions, to meet the following categories:

IMMEDIATE HEALTH HAZARD
DELAYED HEALTH HAZARD

COMPREHENSIVE ENVIRONMENTAL RESPONSE COMPENSATION AND LIABILITY ACT (CERCLA):

This product contains the following substance listed as "Hazardous Substances" under CERCLA, which may require reporting of releases:

CATEGORY	CHEMICAL NAME:	CAS NUMBER:	RQ:	% IN PRODUCT:
	Trichloroethylene	79-01-6	100 lbs	30-50%

TOXIC SUBSTANCES CONTROL ACT (TSCA): All ingredients are listed on the TSCA inventory.

OSHA HAZARD COMMUNICATION STANDARD: This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200

STATE RIGHT-TO-KNOW: The following product component(s) are cited on certain State lists as mentioned. Non-listed components may be shown in the composition section of the MSDS.

CHEMICAL NAME:	CAS NUMBER:	LIST:
Trichloroethylene	79-01-6	CA, MA, MN, NJ, PA, RI
Carbon Black	1333-86-4	CA, MA, MN, NJ, PA, RI

CALIFORNIA PROPOSITION 65: The following statement is made in order to comply with the California Safe Drinking Water and Toxic Enforcement Act of 1986: "WARNING – THIS PRODUCT CONTAINS A CHEMICAL KNOWN TO THE STATE OF CALIFORNIA TO CAUSE CANCER."

CANADIAN REGULATIONS

WHMIS INFORMATION: The Canadian Workplace Hazardous Materials Information System (WHMIS) Classification for this product is:

D1B – Poisonous substance defined by TDG regulations
D2A – Possible, probable or known human carcinogen according to classifications by IARC or ACGIH
D2B – Eye or skin irritant

CPR STATEMENT: This product has been classified in accordance with the hazard criteria of the Canadian Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

HAZARDOUS PRODUCTS ACT INFORMATION: This product contains the following ingredient(s) which are Controlled Products and/or on the Ingredient Disclosure List (Canadian HPA section 13 & 14):



Material Safety Data Sheet

Product No. T-2 Compound "A" & T-2 Compound "B"

COMPONENTS:	CAS #	AMOUNT (% W/W)
Trichloroethylene	79-01-6	1% (English Item 1612, French Item 1646)
Carbon Black	1333-86-4	1% (English Item 309, French Item 1271)

EUROPE: Trichloroethylene: EINECS No. = 201-167-4
Carbon Black: EINCNS No. = 215-609-9

15. OTHER INFORMATION

NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) RATINGS:

Health = 2 Flammability = 1 Reactivity = 0

MEDICAL EMERGENCIES:

**Call CHEMTREC 24 hours a
Day for emergency information
800-424-9300**

FOR ANY OTHER INFORMATION:

**REMA TIP TOP/NO. AMERICA
119 Rockland Ave.
NORTHVALE, NJ 07647
201-768-8100**

NOTICE: REMA TIP/TOP USA believes that the information contained on this material safety data sheet is accurate. The suggested procedures are based on experience as of the date of publication. They are not necessarily all-inclusive nor fully adequate in every circumstance. Also, the suggestions should not be confused with nor followed in violation of applicable laws, regulations, rules or insurance requirements.

**NO WARRANTY IS MADE, EXPRESS OR IMPLIED, OF MERCHANTABILITY,
FITNESS FOR A PARTICULAR PURPOSE OR OTHERWISE.**