

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

TEC Torch® Cartridge

C111 & C112 Rod Cutter Cartridge

C211 & C212 Plate Penetrator Cartridge

Manufactured by Energetic Materials & Products, Inc. 1413 Brandi Ln, Round Rock, TX (512) 380-1992
 ChemTel Emergency Phone Number: 800-255-3924

Signal Word DANGER

TEC Torch® Cartridges are used to cut metallic targets typically in military, law enforcement, first responders, or salvage operations. Cartridges are designed to be ignited by a low voltage DC power supply offered by EMPI. For professional use only.

SECTION 2. HAZARD IDENTIFICATION

Hazard Class: Explosives 1.4G, Articles Pyrotechnic for Technical Purposes, UN0431

Keep away from heat, sparks, open flames, and hot surfaces.

Cartridge contains a nominal 100g of thermite composition.

On ignition, thermite products are ejected through a nozzle with high velocity and extreme temperatures exceeding 3000°C. Ignitor, fuel, and oxygen are all self-contained within the cartridge. Once ignited the reaction is not stoppable.



SECTION 3. COMPOSITION, INFORMATION ON INGREDIENTS

Component Name	CAS #	Proportion
Aluminum	7429-90-5	0-30%
Magnesium	7439-95-4	0-30%
Cupric Oxide	1317-38-0	30-60%
Molybdenum Oxide	1313-27-5	30-60%

SECTION 4. FIRST AID MEASURES

ROUTES OF ENTRY – SIGNS & SYMPTOMS OF EXPOSURE	EMERGENCY AND FIRST AID PROCEDURES
INHALATION: Gases and particulates produced while firing device may result in mild throat, upper respiratory, and lung irritation.	Remove affected person(s) to fresh air. If symptoms persist seek medical attention.
SKIN: Direct contact with torch flame may cause severe burns to protected and unprotected skin.	Affected areas should be classified as thermal and NOT chemical burns. Affected areas are likely to be heavily contaminated with metal and metal oxide particulate. Seek medical attention for treatment.
EYES: Irritation and tearing possible during firing.	Flush with clean water thoroughly and contact a physician.
INGESTION: Not probable.	Contact physician

SECTION 5. FIRE FIGHTING MEASURES

Pyrotechnic Article

Dangerous fire risk.

>>>DO NOT FIGHT FIRES. Item may burn vigorously. In case of fire, keep at least 30 ft away. Items may explode, produce jets of flame, and/or throw fragments if in or near fire. Minimize unreacted cartridge temperature exposure by storing in isolation in approved metal containers or surrounded by dry sand or perlite.

SECTION 6. ACCIDENTAL RELEASE MEASURES

If external cartridge shell is damaged and/or contents are leaking, remove all ignition sources and water. Sweep up materials, place in a sealed bag or container and dispose. Ventilate area and wash spill site after material is completely removed. See Sections 8 and 13 for further information.

SECTION 7. HANDLING AND STORAGE

Handling should be restricted to trained personnel only. During operations, keep cartridges separate from all ignition sources whenever possible. Keep end vinyl caps in place as long as possible to minimize damage and unintentional ignition.

Store items in approved magazine in original manufacturer packaging when applicable. Keep away from fire and ignition sources.

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

PERSONAL PROTECTIVE EQUIPMENT		Goggles and flame retardant gloves, long sleeve shirt, long pants, or suit. Face shield is recommended.			
GLOVES	Nomex or other fire retardant material with long cuff	EYE PROTECTION	Unvented goggles with shatter resistant lenses are recommended	PROTECTIVE CLOTHING	Long sleeve, fire retardant suit.
VENTILATION		Use in well-ventilated area.			
RESPIRATORY PROTECTION		Use appropriate respirator or SCBA in accordance to OSHA 1910.1025			

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Cylindrical metallic canister with flat metallic end and coaxial electrical connector on opposing end. Odorless.

AUTO IGNITION TEMP.: 300°C for internal electric igniter, 460°C for composition

SECTION 10. STABILITY & REACTIVITY DATA

Avoid sources of ignition (i.e. heat, sparks, open flames, and hot surfaces).

Shelf life: Excellent, if stored in manufacturers original packaging.

SECTION 11. TOXICOLOGICAL INFORMATION

Acute effects:	NA	ORL-RAT LD ₅₀ :	NA
Chronic effects	NA	IHL-RAT LC ₅₀ :	NA
Target Organs:	NA	SKN-RBT LD ₅₀ :	NA

ENERGETIC MATERIALS & PRODUCTS, INC

Safety Data Sheet (SDS)

SDS# 013

Revision Date: July 12, 2017

NA = Not available, not all health aspects of this substance or its products have been fully investigated.

SECTION 12. ECOLOGICAL INFORMATION

Data not yet available.

SECTION 13. DISPOSAL CONSIDERATIONS

Please review all federal, state and local regulations that may apply before proceeding.

Fired cartridges may be considered inert and unreactive. Allow items to cool to room temperature and dispose by conventional means.

SECTION 14. TRANSPORT INFORMATION

UN0431 Articles Pyrotechnic for Technical Purposes, 1.4G, PGII

Forbidden on passenger aircraft.

SECTION 15. REGULATORY INFORMATION

Regulated by United States ATFE with a net explosive weight (N.E.W.) of 0.080mg per cartridge based on the internal electric match.

Not ITAR Restricted, EAR99, No license required.

SECTION 16. OTHER INFORMATION

Original MSDS; C100 Model	3/18/2013
Revision; C110 & C210 Models	3/1/2014
Revision; add C111 & C211 Models	11/16/2015
Revision; SDS format	9/6/2016
Revision; add C112 & C212 Models	7/12/2017

IMPORTANT NOTE:

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WARNING, THIS TOOL IS DANGEROUS

This tool contains highly reactive materials that can cause serious injury or death. Energetic Materials & Products Inc. ("EMPI") warrants that the TEC Torch® product (the "Product") will be free from significant defects in materials and workmanship under normal use and service for a period of one year from the manufacture date (the "Warranty Period"). This limited warranty is non-transferrable and applies only to the original purchaser of the Product. This limited warranty also applies only when the Product is used in accordance with the Product manual and directions for use provided with the Product.