

## SECTION 1 – CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PARKELL, INC.  
300 Executive Drive  
Edgewood, NY 11717

Company Telephone Number: (631) 249-1134  
24-Hour Emergency Phone: InfoTrac 1-800-535-5053

PRODUCT NAME: 4-META UNIVERSAL CATALYST-V

MSDS NO: S371

## SECTION 2 – COMPOSITION INFORMATION ON INGREDIENTS

HAZARDOUS COMPONENTS	CAS NUMBER	PEL	TLV	%
tri-n-butylborane (TBB) / partially oxidized (TBB-O) Hydrocarbon	122-56-5 / 688-74-4			

## SECTION 3 – HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW: Highly flammable liquid (F) . Reactive with water and air to generate heat and flammable gas.

## POTENTIAL HEALTH EFFECTS

EYES: May cause irritation, chemical burns and possible corneal injury.

SKIN: May cause skin irritation.

INHALATION: Causes respiratory tract irritation. May cause dizziness, dullness, headache. Higher concentration can produce central nervous system depression, narcosis.

INGESTION: Harmful if swallowed.

CHRONIC EFFECTS: Not known.

SIGNS & SYMPTOMS:

CARCINOGENECITY:  NA NTP?  No IARC MONOGRAPHS?  No ACGIH?

## SECTION 4 – FIRST-AID MEASURES

INHALATION: Remove victim to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

EYES: Immediately flush with flowing water for at least 15 minutes. Get medical attention.

SKIN: Flush with soap and plenty of water. Get medical attention if irritation develops or persists.

INGESTION: Promptly drink several glasses of water or milk to dilute. Get medical attention.

NOTE TO PHYSICIANS:

## SECTION 5 – FIRE-FIGHTING MEASURES

FLASH POINT (TCC): -22°C (Hydrocarbon) FLAMMABLE LIMIT (air, % by vol.) acetone UPPER: 13 % LOWER: 2 %

FLAMMABILITY CLASSIFICATION (CFR 1910.1200): Flammable Liquid UN No. 1993

EXTINGUISHING MEDIA: Foam, dry chemical, carbon dioxide or dry sand, water spray.

FIRE FIGHTING INSTRUCTIONS: During emergency conditions, over- exposure to decom- position products may cause health hazard. Self- contained breathing apparatus should be worn.

UNUSUAL FIRE & EXPLOSION HAZARDS: Highly flammable liquid, reactive with water and air to generate heat and flammable gases.

HAZARDOUS COMBUSTION PRODUCTS: Flammable gas and toxic gas may be released by reaction with water or air.

## SECTION 6 – ACCIDENTAL RELEASE MEASURES

Personal Precaution:

For skin protection wear impervious protective gloves and clothing. For eye protection use safety goggle or a full-face shield. If the exposure limit is exceeded use an organic vapor respirator.

Environmental Precautions: May be hazardous to the environment. Methods For Cleaning-Up: In case material is released or spilled, remove all ignition sources, and ventilate the area of leak or spill. Collect spilled liquid in sealable containers as far as possible. Absorb remaining liquid in sand or inert absorbent and remove to safe place. Contents may develop pressure by decomposition.

## SECTION 7 – HANDLING AND STORAGE

HANDLING: Observe normal warehouse handling procedures. Protect against physical damages.

STORAGE: Store in a dry and dark well-ventilated place at cool (5~30°C) and stable temperature. Store away from ignition sources, flammable solids with large surface area (such as cotton, gauze).

## SECTION 8 – EXPOSURE CONTROLS / PERSONAL PROTECTION

ENGINEERING CONTROLS: Use local exhaust to keep exposures to a minimum.

EYE/FACE PROTECTION: Use safety glasses. Eye wash station near work area.

SKIN PROTECTION: Use impervious protective gloves to prevent skin contact.

RESPIRATORY PROTECTION: None required during normal use of this product.

EXPOSURE GUIDELINES: Not established.

**SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES**

APPEARANCE AND ODOR:	Colorless transparent liquid. Like n-butanol.		
BOILING POINT:	56°C (acetone)	SPECIFIC GRAVITY (H <sub>2</sub> O = 1):	approx. 0.8
VAPOR PRESSURE:	Not known	PERCENT VOLATILES:	
VAPOR DENSITY (Air = 1):	Not known	EVAPORATION RATE (Butyl Acetate = 1):	
SOLUBILITY IN WATER:	Decomposes, partly soluble	PH:	Not applicable

**SECTION 10 – STABILITY AND REACTIVITY**

STABILITY: Reactive with air or water. HAZARDOUS POLYMERIZATION: Will not occur.  
 CONDITIONS TO AVOID: Heat beyond 30°C. Refrigeration. Fluctuating temperature. Direct sunlight. Ignition sources.  
 INCOMPATIBILITY (Materials to avoid): Strong oxidizers or halogenated hydrocarbons. Flammable solids with large surface area (such as gauze, cotton).  
 HAZARDOUS DECOMPOSITION PRODUCTS: Carbon monoxide, butanol, boron oxide, borane.

**SECTION 11 – TOXICOLOGICAL INFORMATION**

Health Hazards: (immediate, delayed, acute, chronic) (TBB-O): Not known. Easily decomposed to n-butanol and boric acid. (acetone): Inhalation of high concentration may cause central nervous system effects characterized by headache, dizziness and unconsciousness.  
 Toxicity: LD<sub>50</sub>: Oral 1,125 mg/Kg (Rat/borane), 2,150 mg/Kg(Mouse/borate)  
 4,360 mg/Kg (Rat/n-butanol), 2,660 mg/Kg (Rat/boric acid)  
 Mutagenicity: Negative (Schmalz G. et al., J. Dent. Res., vol 80, 1234, 2001)

**SECTION 12 – ECOLOGICAL INFORMATION**

General: This substance may be hazardous to the environment.  
 Mobility: When released, this substance is expected to decompose quickly by contact with air or water.  
 Degradability, Accumulation, Ecotoxicity, Other adverse effects: Not known.

**SECTION 13 – DISPOSABLE CONSIDERATIONS**

Danger in disposal: Highly reactive with water and air. This substance should be handled as hazardous waste.  
 Disposal method: Consult federal, state, and local regulations: Do not empty into sewer. This substance should be sent to an approved incinerator.

**SECTION 14 – TRANSPORT INFORMATION (not meant to be all-inclusive)**

PROPER SHIPPING NAME:	Flammable liquid, n.o.s.	UN/NA NUMBER:	UN 1993
DOT HAZARD LABEL:	UN1993 - Flammable liquid, n.o.s.		
PRECAUTIONS FOR TRANSPORT:	Highly flammable liquid		
IMDG	Class 3.2, PG II		
ICAO/IATA	Class 3, PG II		

**SECTION 15 – REGULATORY INFORMATION (not meant to be all-inclusive)****SECTION 16 – OTHER INFORMATION**

NFPA CODES:	HEALTH -	FLAMMABILITY -	REACTIVITY -
WORK/HYGIENIC PRACTICES: Wash hands before eating, drinking or smoking.			
DATE PREPARED:	03/29/06	PREPARED BY:	R. Burke

To the best of our knowledge, the information on this MSDS sheet is accurate. However, the information is provided without any warranty, expressed or implied, regarding its correctness or completeness. Recipients are advised to confirm in advance of need that the information is current, applicable, and suitable to their circumstances. This information is not warranted to be whether originating with the company or not.