

Material Safety Data Sheet

Borg-Warner
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Borg-Warner
Chemicals

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WESTON TNPP/WESTON 399/WESTON 399B

Date November 1, 1986
MSDS No. CS-0019-6A

The following information has been compiled from current sources which are believed to be accurate and reliable. Since it is not possible to anticipate all conditions under which this information and the subject products will be used, it should not be assumed that all acceptable safety measures are defined, or that other additional procedures may not be required under individual circumstances. User should insure that the information is relevant to each particular condition or application. Borg-Warner Chemicals, Inc. makes no warranty, either express or implied, including merchantability and fitness.

1. PRODUCT IDENTIFICATION

.. BRAND NAME..... WESTON TNPP/WESTON 399*/WESTON 399B*
.. COMMON NAMES..... tris-nonylphenol phosphite
.. CHEMICAL NAME..... phosphorous acid, tris-nonylphenyl ester
.. CAS NUMBER..... 26523-78-4
.. FORMULA..... C45 H69 O3 P
.. DOT HAZARD CLASS. not classified

* WESTON 399/WESTON 399B contain less than 1.0% by wt. triisopropanolamine (TIPA).

2. HAZARDOUS INGREDIENTS

CHEMICAL NAME	COMMON NAME	CAS NUMBER
nonylphenol	nonylphenol	25154-52-3

3. PHYSICAL AND CHEMICAL PROPERTIES

.. STATE..... straw-colored liquid
.. MELTING POINT..... unknown
.. BOILING POINT..... unknown
.. VAPOR PRESSURE..... 5 mmHg @ 437°F (225°C)
.. VAPOR DENSITY..... 23.8 (air = 1)
.. SPECIFIC GRAVITY..... 0.980-0.992 @ 25°C/15.5°C
.. WATER SOLUBILITY..... insoluble
.. pH..... not applicable
.. ODOR..... mild

4. PHYSICAL HAZARD INFORMATION

.. FLASH POINT..... TNPP: 405°F (207°C) PMCC
399/399B: 385°F (196°C) PMCC
.. LOWER FLAMMABLE LIMIT.. unknown
.. UPPER FLAMMABLE LIMIT.. unknown
.. AUTO IGNITION TEMP..... unknown
.. EXTINGUISHING MEDIA.... Dry chemical, CO2, foam, water spray

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4. PHYSICAL HAZARD INFORMATION (CONTINUED)

- .. REACTIVITY..... Can hydrolyze in the presence of water.
- .. INCOMPATIBILITIES..... Acids, oxidizers, water.
Mixing with other chemicals should be done only under the supervision of qualified individuals.
- .. CONDITIONS TO AVOID.... Do not store above 150°F (66°C). Do not heat above flash point.
- .. HAZARDOUS DECOMPOSITION PRODUCTS : Hydrolyzed by moisture with the production of phosphorous acid and nonylphenol. Phosphine is a possible byproduct of hydrolysis at elevated temperatures.
- .. PYROPHORIC.. no
- .. EXPLOSIVE... no
- .. FLAMMABLE... no
- .. COMBUSTIBLE. no
- .. OXIDIZER.... no
- .. PEROXIDE.... no
- .. COMPRESSED GAS..... no

5. HEALTH HAZARD INFORMATION

- .. PRECAUTIONARY INFORMATION..... Avoid skin and eye contact. Use with adequate ventilation.
- .. SYMPTOMS OF OVEREXPOSURE.....
 - * Acute: Repeated and prolonged skin exposure may cause mild irritation.
 - * Chronic: Subchronic (90-day) and long term (2-year) ingestion studies with tris-nonylphenyl phosphite indicate no toxic effects.
- .. RESTRICTIVE MEDICAL CONDITIONS.. unknown
- .. PRIMARY ROUTES OF EXPOSURE.....
 - INHALATION..... unlikely, unless heated
 - SKIN ABSORPTION.. unknown
 - INGESTION..... unlikely
 - SKIN AND EYE CONTACT..... yes

5. HEALTH HAZARD INFORMATION (CONTINUED)

.. TOXICITY INFORMATION.....

- * Acute oral LD50 (rat) = 19.5g/kg
- * Acute inhalation LC50 (rats) > 2mg/L
- * Acute dermal LD50 (rabbits) > 200mg/kg
- * D.O.T. Corrosivity: Non-Corrosive
- * Found to be a primary skin irritant when applied repeatedly to the skin of rabbits.
- * A ninety day feeding study in weanling rats produced kidney damage at 5% of the diet but no effect at the 0.2% and 1.0% levels.
- * Studies in rats fed 0.1%, 0.3%, 1.0% trisnonylphenyl phosphite in the diet for 2 years showed no significant compound related abnormalities including cholinesterase depression.
- * A two year chronic study in dogs showed no effects at 0.1%, 0.3%, and 1.0% of the diet.
- * A multigeneration reproductive study in rats fed at 50, 167, and 500 mg/kg showed only slight effects (reduced food uptake efficiency at the high dose).

.. FIRST AID PROCEDURES

- INGESTION: If person is conscious, give large amounts of water to drink. Keep person warm and quiet. Get medical attention immediately.
- INHALATION: Remove to fresh air immediately. If breathing has stopped, give artificial respiration. Keep the affected person warm and at rest. Get medical attention immediately.
- SKIN CONTACT: Immediately wash with soap and water. If irritation develops, obtain medical attention. Remove contaminated clothing immediately, wash before reuse. Remove and discard contaminated shoes.
- EYE CONTACT: Immediately wash with large amounts of water, keeping the lids open. Get medical attention immediately. Contact lenses should not be worn when working with this material.

5. HEALTH HAZARD INFORMATION (CONTINUED)

.. EXPOSURE LIMITS

OSHA PEL.... not regulated
TLV..... not listed
OTHERS..... unknown

.. CARCINOGENIC

OSHA REGULATED..... not regulated
NATIONAL TOXICOLOGY PROGRAM..... not tested
INTERNATIONAL AGENCY
FOR RESEARCH ON CANCER..... not listed

6. PRECAUTIONS FOR SAFE HANDLING AND STORAGE

Store in a cool, dry area, away from heat,
spark or flame. Avoid skin and eye contact.
Wash hands after handling. Wear proper personal
protective equipment.

.. SPILLS/LEAKS/RELEASES

WORKPLACE RELEASE: Absorb on inert sorbent. Shovel
into drums. Remaining material may be
emulsified with soap and water and absorbed
on additional sorbent. Disposal must be
in accordance with federal, state, and local
regulations.

SOIL RELEASE: Do not flush to sewer. Water causes
hydrolysis. Scoop up contaminated soil and
place in dry drums. Dispose of as laws and
regulations allow.

WATER RELEASE: Since phosphites can hydrolyze,
notification of the governing agency may
be appropriate. Phosphorous acid and
nonylphenol may be released. The by-product
nonylphenol is acutely toxic to fish. The
96 hr. LD50 is 0.15 mg/l for fat head
minnows. Releases of large amounts should
be reported to the appropriate agencies.

AIR RELEASE: Unlikely to be released to the air because
of low volatility.

6. PRECAUTIONS FOR SAFE HANDLING AND STORAGE (CONTINUED)

RCRA WASTE NUMBER: not applicable

REPORTABLE QUANTITY (PER EPA): not applicable

7. ENGINEERING CONTROLS AND PERSONAL PROTECTIVE EQUIPMENT

.. VENTILATION: Recommended; sufficient to control vapors and odors.

.. PERSONAL PROTECTIVE EQUIPMENT

DEGREE OF EXPOSURE		EYE	SKIN	RESPIRATORY	OTHERS
I	CLOSED SYSTEM (REMOTE)	A	A	none	none
II	OCCASIONAL (INFREQUENT)	A	A	none	B
III	REPEATED & PROLONGED	B	A	A	BC
IV	SPILLS (GROSS CONTACT)	B	B	A	BD

RESPIRATORY PROTECTION: NIOSH approved organic vapor cartridges.

GLOVES: Impervious, such as rubber or plastic.

KEY FOR PERSONAL PROTECTIVE EQUIPMENT

EYE	A	SAFETY GLASSES	OTHERS	A	FACESHIELD
	B	CHEMICAL GOGGLES		B	GLOVES
	C	GAS TIGHT GOGGLES		C	APRON
				D	BOOTS
SKIN	A	ORDINARY WORK CLOTHES			
	B	IMPERVIOUS CLOTHING			
	C	IMPERVIOUS AND GAS TIGHT			

RESPIRATORY PROTECTION

A HALF MASK W/CARTRIDGE
B FULL FACE W/CANNISTER
C FULL FACE W/SUPPLIED AIR

unk = UNKNOWN

n.a. = NOT APPLICABLE

> = GREATER THAN

< = LESS THAN

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FOR ADDITIONAL INFORMATION TELEPHONE304-296-2554 or if
no answer 304-863-7480

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Material Safety Data Sheet

Borg-Warner Chemicals, Inc. International Center
Perkinsburg West Virginia 26102
Telephone 804 424-5411



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Chemicals

WESTON TNPP/WESTON 399/WESTON 399B

Date October 25, 1985
MSDS No. CS-0019-5A

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