

M A T E R I A L S A F E T Y D A T A S H E E T

RNA CORPORATION
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I. IDENTIFICATION

PRODUCT NAME: RNA TRI-AD 73

CHEMICAL NAME: Nonylphenol polyethylene phosphate ester

CHEMICAL FAMILY: phosphate ester

FORMULA: Trade secret

MOLECULAR WEIGHT: trade secret

SYNONYMS: phosphate ester

CAS # and

CAS NAME: Trade secret

II. PHYSICAL DATA (Determined on typical material)

BOILING POINT, 760 mm Hg: 230°F

FREEZING POINT: -15°F

SPECIFIC GRAVITY (H₂O=1): 1.083 at 60°F

VAPOR PRESSURE AT 20°C: 0.05 mm Hg

VAPOR DENSITY (air=1): greater than 1

SOLUBILITY IN WATER by wt: 0.8% Hazy

EVAPORATION RATE (Butyl Acetate=1): 0.14

APPEARANCE AND ODOR: hazy clear, slight IPA smell

III. INGREDIENTS

| <u>MATERIAL</u> | <u>%</u> | <u>TLV (Units)</u> | <u>HAZARD</u> |
|-----------------|----------|---------------------|-------------------------|
| IPA | TS | 400 ppm | eye irritant, flammable |
| phosphoric acid | 2% | 1 mg/m ³ | corrosive |
| phosphate ester | TS | not established | See section V |

PRODUCT NAME:
-----IV. FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (test method(s)): 115°F Pensky-Martin ASTM-93

FLAMMABLE LIMITS IN AIR, % by volume: Lower: not determined
Upper:EXTINGUISHING MEDIA: alcohol-type, or all purpose-type foams applied by
mfg's recommended techniques for large fires. Carbon monoxide or dry
chemical for small fires.SPECIAL FIRE FIGHTING PROCEDURES: Do not direct a solid stream of water or
foam into hot, burning pools: this may cause frothing and increase fire
intensity. Use self-contained breathing apparatus and protective
clothing.UNUSUAL FIRE AND EXPLOSION HAZARDS: This material may produce a floating
fire hazard.
-----V. HEALTH HAZARD DATA

TLV AND SOURCE: None established by ACGIH OR OSHA.

EFFECTS OF SINGLE OVEREXPOSURE:

SWALLOWING: May cause irritation and burning of the gastrointestinal
tract. May cause nausea, abdominal discomfort, vomiting and diarrhea.SKIN ABSORPTION: Prolonged or widespread exposure may result in the
absorbtion of potentially harmful amounts of material. May cause skin
burns and pain to cuts and abrasions.INHALATION: May cause chest discomfort and coughing. Mist may cause
irritation to respiratory tract.SKIN CONTACT: Repeated exposure may cause skin burns. Brief exposure
should not produce any harmful effects.EYE CONTACT: Causes severe pain and reddness. Will swell conjunctiva,
with possible chemical burns.EFFECTS OF REPEATED OVEREXPOSURE: Repeated skin overexposure may result in
the development of a cumulative dermatitis. Overexposure to eyes may
result in eye damage.MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE: Repeated exposure may
aggravate existing medical conditions.SIGNIFICANT LABORATORY DATA WITH POSSIBLE RELEVANCE TO HUMAN HEALTH
HAZARD EVALUATION: This product will cause eye injury.

PRODUCT NAME:

OTHER EFFECTS OF OVEREXPOSURE: None Known

EMERGENCY AND FIRST AID PROCEDURES:

SWALLOWING: Give two glasses of water. Do not induce vomiting. Call a physician immediately.

SKIN: Remove contaminated clothing. Flush skin with plenty of water. If contact has been widespread and/or prolonged, or if irritation persists, call a physician. Wash clothing before reuse.

INHALATION: Remove to fresh air. Call a physician if discomfort persists.

EYES: Immediately flush eyes with plenty of water and continue flushing for at least 15 minutes. Get medical care, preferably from an ophthalmologist, urgently.

NOTES TO PHYSICIAN: There is no specific antidote. Treatment of overexposure should be directed at the control of symptoms and the clinical condition of the patient. Due to the irritant and surfactant action of the material, if it is aspirated during swallowing or vomiting, there may be lung injury. Therefore, emesis should not be induced by mechanical or pharmacological means. If it is considered that evacuation of the stomach contents is necessary, this should be done by means least likely to result in aspiration.

VI. REACTIVITY DATA

STABILITY: Stable

CONDITIONS TO AVOID: None

INCOMPATIBILITY (materials to avoid): Avoid strong bases, strong acids, strong oxidizing agents and materials reactive with hydroxyl compounds.

HAZARDOUS COMBUSTION OR DECOMPOSITION PRODUCTS: Burning can produce carbon monoxide/dioxide.

HAZARDOUS POLYMERIZATION: Will not occur

CONDITIONS TO AVOID: None known

VII. SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED: Dike and contain spill. Wear protective clothing and eyewear. Avoid discharge to natural waters, highly toxic to fish at high levels.

WASTE DISPOSAL METHOD: Contact local, state, and Federal regulations for disposal methods.

PRODUCT NAME:

 VIII. SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION (specify type): None expected to be needed.

VENTILATION: General (mechanical) room ventilation is expected to be satisfactory.

PROTECTIVE GLOVES: PVC coated

EYE PROTECTION: Monogoggles are preferred.

OTHER PROTECTIVE EQUIPMENT: Eye wash is suggested.

 IX. SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE:

DANGER!
 Combustible
 Contact May Cause Eye Damage
 Harmful if Swallowed
 May cause skin irritation

OTHER PRECAUTIONS: The phosphate ester part of this product is not readily biodegradable in a wastewater system and is highly toxic to aquatic life (at high levels).

 X. REGULATORY INFORMATION

STATUS ON SUBSTANCE LISTS:

The concentrations shown are maximum or ceiling levels (weight %) to be used for calculations for regulations. Trade Secrets are indicated by "TS".

 FEDERAL EPA

Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) requires notification of the National Response Center of release of quantities of Hazardous Substances equal to or greater than the reportable quantities (RQs) in 40 CFR 302.4.

Components present in this product at a level which could require reporting under the statute are:

| CHEMICAL | CAS NUMBER | UPPER BOUND CONCENTRATION % |
|----------|------------|--------------------------------|
| Dioxane | 123-91-1 | 0.0009% |

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SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT OF 1986 (SARA) TITLE III requires emergency planning based on Threshold Planning Quantities (TPQs) and release reporting based on Reportable Quantities (RQs) in 40 CFR 355 (used for SARA 302, 304, 311 and 312).

Components present in this product at a level which could require reporting under the statute are: None

SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT OF 1986 (SARA) TITLE III requires submission of annual reports of release of toxic chemicals that appear in 40 CFR 372 (for SARA 313). This information must be included in all MSDSs that are copied and distributed for this material.

Components present in this product at a level which could require reporting under the statute are:

| CHEMICAL | CAS NUMBER | UPPER BOUND CONCENTRATION % |
|-----------------|-------------|--------------------------------|
| IPA | 67-63-0 | TS |
| Glycol Ether | Not Applic. | 2.0% |
| phosphoric acid | 7664-38-2 | 2.0% |

STATE RIGHT-TO-KNOW

CALIFORNIA Proposition 65

This product contains trace amounts of Acetaldehyde, dioxane, and formaldehyde which the State of California has found to cause cancer, birth defects and other reproductive harm.

MASSACHUSETTS Right-To-Know, Substance List (MSL) Hazardous Substances and Extraordinarily Hazardous Substances on the MSL must be identified when present in products.

Components present in this product at a level which could require reporting under the statute are:

EXTRAORDINARILY HAZARDOUS SUBSTANCES (= > 0.0001%)

| CHEMICAL | CAS NUMBER | UPPER BOUND CONCENTRATION % |
|--------------|------------|--------------------------------|
| IPA | 67-63-0 | TS |
| dioxane | 123-91-1 | 0.0009% |
| acetaldehyde | 75-07-0 | 0.0003% |

PENNSYLVANIA Right-To-Know, Hazardous Substance List Hazardous Substances and Special Hazardous Substances on the List must be identified when present in products.

Components present in this product at a level which could require reporting under the statute are:

| | | |
|-----|---------|----|
| IPA | 67-63-0 | TS |
|-----|---------|----|

PRODUCT NAME:

Toxic Substances Control Act (TSCA) STATUS: The ingredients of this product are on the TSCA inventory.

CALIFORNIA SCAQMD RULE 443.1 VOC'S: not available

OTHER REGULATORY INFORMATION:

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