



SAFETY DATA SHEET

1. PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: TITRANT A5
PRODUCT NUMBER: A5
PRODUCT FAMILY: ACID
MANUFACTURER: KO MANUFACTURING, INC
 2720 E. DIVISION STREET
 SPRINGFIELD, MO 65803
 417-866-8000

DATE PREPARED: 1/2/2020
SUPERCEDED DATE: 8/28/2018

EMERGENCY CONTACT:
 CHEMTREC 800-424-9300

INFORMATION USE: ACIDIC TITRANT

2. HAZARD IDENTIFICATION

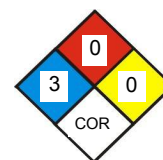
DOT HAZARD CLASSIFICATION: CORROSIVE LIQUID

SIGNAL WORD: DANGER!

ROUTE OF EXPOSURE: EYE CONTACT, SKIN CONTACT, INGESTION, INHALATION

GHS HAZARD CLASSIFICATION: CORROSIVE TO METAL 1
 SKIN CORROSIVE 1C
 EYE DAMAGE/IRRITATION 1

NFPA



GHS LABEL ELEMENTS: H290 - May be corrosive to metal.

H314 - Causes severe skin burns and eye damage.

P234 - Keep only in original container.

P260 - Do not breathe dust/fume/gas/vapours/spray.

P264 - Wash exposed skin thoroughly after handling.

P280 - Wear protective gloves/boots/clothing/eye protection/face protection.

P301+P330+P331 - IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

P303+P361+P353 - IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing.

Rinse skin with water/shower.

P351 - Rinse cautiously with water for several minutes.

P363 - Wash contaminated clothing before reuse.

P304+P340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P310 - Immediately call POISON CENTER or doctor/physician.

P390 - Absorb spillage to prevent material damage.

P404 - Store in a closed container.

P405 - Store locked up.

P406 - Store in corrosive resistant HDPE plastic container.

P501 - Dispose of content/container in accordance with local/national regulations.

PICTOGRAMS



3. COMPOSITION IDENTIFICATION

INGREDIENTS:

HYDROCHLORIC ACID
 WATER

C.A.S. NUMBER:

7647-01-0
 7732-18-5

PERCENT:

<3.0%
 Balance

4. FIRST AID MEASURES

EYE CONTACT: RINSE CAUTIOUSLY WITH WATER FOR SEVERAL MINUTES. REMOVE CONTACT LENSES, IF PRESENT AND EASY TO DO SO. CONTINUE RINSING. CALL A PHYSICIAN IMMEDIATELY.

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4. FIRST AID MEASURES - CONTINUED

SKIN CONTACT: WASH EXPOSED SKIN THOROUGHLY AFTER HANDLING. REMOVE/TAKE OFF IMMEDIATELY ALL CONTAMINATED CLOTHING. RINSE SKIN WITH WATER/SHOWER. GET MEDICAL ADVICE/ATTENTION.

INGESTION: RINSE MOUTH. DO NOT INDUCE VOMITING. IF CONSCIOUS, GIVE LARGE QUANTITIES OF WATER TO DRINK. CALL A POISON CENTER OR PHYSICIAN IMMEDIATELY.

INHALATION: REMOVE VICTIM TO FRESH AIR AND KEEP AT REST IN A POSITION COMFORTABLE FOR BREATHING. GIVE OXYGEN OR ARTIFICIAL RESPIRATION AS NEEDED. CALL A POISON CENTER OR PHYSICIAN IMMEDIATELY.

5. FIRE FIGHTING MEASURES

FLAMMABLE PROPERTIES: NON FLAMMABLE.

FLASH POINT: DOES NOT FLASH.

SUITABLE EXTINGUISHING MEDIA: DRY CHEMICAL, FOAM OR CARBON DIOXIDE, WATER SPRAY.

UNSUITABLE EXTINGUISHING MEDIA: NOT ESTABLISHED.

SPECIFIC HAZARDS ARISING FROM THE CHEMICAL: NONE KNOWN.

PROTECTIVE EQUIPMENT AND PRECAUTIONS FOR FIREFIGHTERS: WEAR SELF-CONTAINED BREATHING APPARATUS (PRESSURE DEMAND MSHA/NIOSH APPROVED) AND FULL PROTECTIVE GEAR.

6. ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS: AVOID CONTACT WITH EYES AND SKIN. SPILL AREA MAY BE SLIPPERY. WEAR PROPER PROTECTIVE EQUIPMENT WHEN DEALING WITH RELEASE.

ENVIRONMENTAL PRECAUTIONS: CONTAIN SPILL TO AVOID RELEASE TO THE ENVIRONMENT. KEEP CONTAINER TIGHTLY CLOSED.

METHODS FOR CONTAINMENT AND CLEAN-UP: EVACUATE AREA. VENTILATE AREA. NEUTRALIZE SPILL WITH SODIUM CARBONATE. COLLECT FOR DISPOSAL USING AN INERT ABSORBENT.

7. HANDLING AND STORAGE

HANDLING: HANDLE WITH CARE AND AVOID CONTACT WITH EYES AND SKIN. ALWAYS WEAR PROPER CHEMICAL RESISTANT PROTECTIVE EQUIPMENT 29CFR1910.132-138. WASH THOROUGHLY AFTER HANDLING.

STORAGE: AVOID RELEASE TO THE ENVIRONMENT. STORE IN LOCKED STORAGE USING CORROSIVE RESISTANT CONTAINERS. KEEP OUT OF REACH OF CHILDREN.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS: IF MIST LEVELS ARE HIGH SPECIAL VENTILATION MAY BE REQUIRED.

EYE / FACE PROTECTION: CHEMICAL GOGGLES AND FULL FACE SHIELD.

SKIN PROTECTION: CHEMICAL RESISTANT GLOVES, APRON AND BOOTS.

THRESHOLD LIMIT VALUE (TLV): HYDROCHLORIC ACID, 2 PPM

9. PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE: LIQUID.

APPEARANCE: CLEAR LIQUID.

ODOR: ACID SCENT.

BOILING POINT: NOT ESTABLISHED.

FREEZING POINT: NOT ESTABLISHED.

SPECIFIC GRAVITY: 1.01

pH (1%): 1.5-2.5

EVAPORATION RATE: LESS THAN 1

FLASH POINT: DOES NOT FLASH.

LOWER FLAMMABILITY/EXPLOSIVE LIMIT: NOT ESTABLISHED.

UPPER FLAMMABLE/EXPLOSIVE LIMIT: NOT ESTABLISHED.

AUTO-IGNITION TEMPERATURE: NOT ESTABLISHED.

VISCOSITY: NOT ESTABLISHED.

REALITIVE DENSITY: 8.4 LBS./GL.

SOLUBILITY: SOLUBLE.

VAPOR PRESSURE: 2.13 kPa

VAPOR DENSITY: NOT ESTABLISHED.

DECOMPOSITION TEMPERATURE: NOT ESTABLISHED.

PARTICAL COEFFICIENT: NOT ESTABLISHED.
N-OCTANOL/WATER

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10. STABILITY AND REACTIVITY

CHEMICAL STABILITY: STABLE.

CONDITIONS TO AVOID: NO UNUSUAL CONDITIONS.

INCOMPATIBLE MATERIALS: SOFT METALS. STRONG ALKALIES. DO NOT MIX WITH OTHER CHEMICALS.

HAZARDOUS DECOMPOSITION PRODUCTS: CARBON MONOXIDE AND DIOXIDE WITH THERMAL DECOMPOSITION.

11. TOXICOLOGICAL INFORMATION

EYE IRRITATION/CORROSION: CAN CAUSE SEVERE BURNS TO EYES AND SKIN

EFFECTS OF SHORT-TERM EXPOSURE: IRRITATION OR BURNS TO EYES, SKIN AND MOUTH.

INGESTION: CAN CAUSE SEVERE BURNS TO MOUTH, THROAT AND STOMACH.

LD-50: NOT ESTABLISHED.

CARCINOGENICITY: NOT CONSIDERED A CARCINOGEN BY IARC, ACGIH, NTP, OR OSHA

12. ECOLOGICAL IDENTIFICATION

ECOTOXICITY: NOT ESTABLISHED.

PERSISTENCE AND DEGRADABILITY: BIODEGRADABLE.

BIOACCUMULATION/ACCUMULATION: NOT ESTABLISHED.

13. DISPOSAL CONDITIONS

THIS MATERIAL WHEN DISCARDED IS A HAZARDOUS WASTE DEFINED BY 40CFR261. MATERIALS ARE TO BE DISPOSED OF IN ACCORDANCE WITH ALL FEDERAL, STATE AND LOCAL REGULATIONS.

14. TRANSPORTATION INFORMATION

GROUND SHIPPING INFORMATION:

UN1789, HYDROCHLORIC ACID, SOLUTION, 8, PGIII, LTD. QTY.

WATER SHIPPING INFORMATION:

UN1789, HYDROCHLORIC ACID, SOLUTION, 8, PGIII, LTD. QTY.

AIR SHIPPING INFORMATION:

CAN NOT SHIP BY AIR

15. REGULATORY INFORMATION

US FEDERAL REGULATIONS:

TSCA (TOXIC SUBSTANCE CONTROL ACT) ALL COMPONENTS LISTED ON TSCA INVENTORY.

SARA TITLE III (SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT):

313 REPORTABLE INGREDIENTS

CAS NUMBER:

PERCENT:

NONE.

STATE REGULATIONS:

INTERNATIONAL REGULATIONS: CLASS E CORROSIVE UNDER CANADIAN WHMIS

SECTION 15 NOTES: NONE.

16. OTHER INFORMATION

PHONE NUMBER: 417-866-8000

DATE OF PREPARATION: 1/2/2020

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