



## MATERIAL SAFETY DATA SHEET

### 1. PRODUCT AND COMPANY IDENTIFICATION:

<b>PRODUCT CODE</b>	A0411
<b>PRODUCT NAME</b>	NOOTKATONE
<b>SUPPLIER</b>	SHANGHAI M & U INTERNATIONAL TRADE CO., LTD. RM 1717, NO 598 NORTH NUJIANG ROAD 200333 SHANGHAI, CHINA +86-21-32515501 32515502 SALES@MU-INTEL.COM

**FOR EMERGENCIES CALL CHEMTREC: 800-424-9300 (24-HOURS)**

### 2. HAZARD IDENTIFICATION:

#### HMIS HAZARD CLASSIFICATIONS

HEALTH = 2 FLAMMABILITY = 1 REACTIVITY = 0 PROTECTION = B

#### LABEL PRECAUTIONARY STATEMENTS

#### GHS CLASSIFICATION AND LABELLING

THE FOLLOWING DETERMINATIONS PER THE GLOBALLY HARMONIZED SYSTEM OF

CLASSIFICATION AND LABELLING OF CHEMICALS (GHS) HAVE BEEN MADE:

#### GHS SIGNAL WORD

WARNING

#### GHS SYMBOLS

GHS07 EXCLAMATION MARK

#### GHS LABELING/HAZARD STATEMENTS

H317 MAY CAUSE AN ALLERGIC SKIN REACTION

#### GHS LABELING/PRECAUTIONARY STATEMENTS

P272 CONTAMINATED WORK CLOTHING SHOULD NOT BE ALLOWED OUT OF THE WORKPLACE.

P280 WEAR PROTECTIVE GLOVES/PROTECTIVE CLOTHING/EYE PROTECTION/FACE PROTECTION.

P302+P352 IF ON SKIN: WASH WITH PLENTY OF SOAP AND WATER.

P333+P313 IF SKIN IRRITATION OR RASH OCCURS: GET MEDICAL ADVICE/ATTENTION.

P363 WASH CONTAMINATED CLOTHING BEFORE REUSE.

P501 DISPOSE OF CONTENTS/CONTAINER IN ACCORDANCE WITH LOCAL/REGIONAL/NATIONAL/INTERNATIONAL REGULATIONS.

### **3. COMPOSITION AND INFORMATION ON INGREDIENTS:**

CAS #: 4674-50-4

FEMA #: 3166      COE #: 11164

MF: C15H22O

EC NO: 225-124-4

MINIMUM PURITY: 84.0%

ADDITIVES: SYNTHETIC ALPHA TOCOPHEROL @ 0.10%

SYNONYM(S)

2(3H)-NAPHTHALENONE, 4,4A,5,6,7,8-HEXAHYDRO-4,4A-DIMETHYL-6-(1-METHYLETHENYL)-, (4R,4AS,6R)-

### **4. FIRST-AID GUIDE:**

INHALATION EXPOSURE: REMOVE TO FRESH AIR. GIVE OXYGEN AND CALL A PHYSICIAN.

EYE CONTACT: FLUSH WITH WATER FOR 15 MIN. SEEK MEDICAL HELP IF NECESSARY.

SKIN CONTACT: WASH AREA WELL WITH WATER. SEEK MEDICAL HELP IF NECESSARY.

INGESTION: ADMINISTER WATER AND CALL A PHYSICIAN OR POISON CONTROL

CENTER IMMEDIATELY. DO NOT INDUCE VOMITING.

### **5. FIRE-FIGHTING GUIDE:**

EXTINGUISHING MEDIA

CO<sub>2</sub>, FOAM, DRY CHEMICAL

SPECIAL FIRE FIGHTING PROCEDURES

USE STANDARD FIRE FIGHTING PROCEDURES.

UNUSUAL FIRE AND EXPLOSION HAZARDS:

NONE.

### **6. ACCIDENTAL RELEASE GUIDE:**

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED

STANDARD ABSORBENTS CAN BE USED.

WASTE DISPOSAL METHOD: INCINERATION OR SANITARY LANDFILL IN ACCORDANCE WITH LOCAL, STATE, AND FEDERAL REGULATIONS.

### **7. HANDLING AND STORAGE:**

HANDLING

OBSERVE ALL WARNINGS AND PRECAUTIONS LISTED FOR THE PRODUCT.

USE IN ACCORDANCE WITH GOOD MANUFACTURING AND INDUSTRIAL HYGIENE PRACTICES. USE PRODUCT IN A PROPERLY VENTILATED WORK AREA. DO NOT EAT, DRINK OR SMOKE WHILE HANDLING PRODUCT.

**STORAGE**

PACKAGING: GLASS, PLASTIC, ALUMINUM OR PHENOLIC LINED STEEL  
STORE TIGHTLY SEALED UNDER INERT GAS IN A COOL, WELL-VENTILATED AREA.

**FIRE PROTECTION**

KEEP AWAY FROM HEAT, SPARKS, AND OPEN FLAME.

**8. EXPOSURE AND PERSONAL PROTECTION:**

VENTILATION: LOCAL EXHAUST PREFERRED. GENERAL VENTILATION REQUIRED.

RESPIRATORY: USUALLY NOT REQUIRED. AVOID INHALING CONCENTRATED VAPORS.

SKIN: AVOID SKIN CONTACT. USE CHEMICAL RESISTANT GLOVES.

EYES: SPLASH-PROOF SAFETY GLASSES OR GOGGLES.

OTHER PROTECTIVE EQUIPMENT: SAFETY SHOWER, EYE WASH

**9. PHYSICAL AND CHEMICAL PROPERTIES:**

PHYSICAL STATE: LIQUID

APPEARANCE: YELLOW SOLID/LIQUID

ODOR DESCRIPTION: CITRUS, GRAPEFRUIT ODOR.

BOILING POINT: 298.76 C (EPI 4.0)

VAPOR PRESSURE : 0.000666 MMHG (20C, EPI 4.0)

VAPOR DENSITY (AIR = 1): > 1

SPECIFIC GRAVITY @ 25C (WATER = 1): 0.9910:1.0120

SOLUBILITY IN WATER: INSOLUBLE IN WATER; SOLUBLE IN ALCOHOL.

FLASH POINT (CC): 230 F 110 C

LOGP : 4.880

**10. STABILITY AND REACTIVITY:**

INCOMPATIBILITIES

CONDITIONS TO AVOID: PRESENTS NO SPECIAL REACTIVITY HAZARD.

MATERIALS TO AVOID: STRONG OXIDIZING AGENTS

HAZARDOUS COMBUSTION PRODUCTS

CO, CO2, WATER

**11. TOXICOLOGICAL INFORMATION:**

ACUTE EFFECTS

MOST LIKELY ROUTE OF ENTRY IS THROUGH THE SKIN.

FULL STRENGTH LIQUID MAY CAUSE ALLERGIC DERMATITIS.

FULL STRENGTH MAY BE IRRITATING TO SKIN AND EYES.

**IFRA RECOMMENDATIONS**

THERE IS AN IFRA GUIDELINE REGARDING THIS PRODUCT.

PLEASE VISIT [WWW.IFRAORG.ORG](http://WWW.IFRAORG.ORG) FOR THE FULL TEXT OF THE GUIDELINE, OR CONTACT BEDOUKIAN RESEARCH, INC. FOR MORE INFORMATION.

THIS MATERIAL IS NOT TO BE USED AS A FRAGRANCE INGREDIENT.

**IRRITATION DATA**

10% IN PETROLATUM PRODUCED NO IRRITATION IN HUMANS. RESULT FOR 86% PURE NOOTKATONE.

10% IN PETROLATUM PRODUCED SENSITIZATION IN HUMANS. RESULT FOR 86% PURE NOOTKATONE.

**TOXICITY DATA**

LD50 DERMAL (RABBIT) > 5 G/KG.

LD50 ORAL (RAT) > 5 G/KG.

S. TYPHIMURIUM STRAINS TA1535, TA1537 OR TA97, TA98, TA100, TA102 TESTED UP TO 50 UG/PLATE W/O S9 AND 150 UG/PLATE W/ S9.

VEHICLE DMSO. RESULT: NO EFFECTS.

SUBCHRONIC (RAT): 28 DAY STUDY. DOSE LEVEL 10 MG/KG/DAY

ADMINISTERED BY

GAVAGE. NO OBSERVED ADVERSE EFFECT LEVEL, NOAEL, ESTABLISHED AT 10 MG/KG/DAY. VEHICLE WAS ARACHIS OIL BP.

THRESHOLD LIMIT VALUE (TLV): NOT ESTABLISHED

OSHA PERMISSABLE EXPOSURE LIMIT (PEL): NOT ESTABLISHED

LISTED AS CARCINOGEN BY NTP, IARC, OR OSHA?: NO

**12. ECOLOGICAL INFORMATION:**

**GENERAL**

PREVENT CONTAMINATION OF SOIL, GROUND- AND SURFACE WATER

**ECOTOXIC EFFECTS**

BIODEGRADATION TEST (OECD 301F): 100 MG/L NOT READILY

**BIODEGRADABLE**

BIODEGRADATION 65% AFTER 28 DAYS. MAT'L SHOULD BE REGARDED AS INHERENTLY AND ULTIMATELY BIODEGRADABLE

**13. DISPOSAL RECOMMENDATIONS:**

**WASTE DISPOSAL METHOD**

INCINERATION OR SANITARY LANDFILL IN ACCORDANCE WITH LOCAL, STATE, AND FEDERAL REGULATIONS

**14. TRANSPORTATION INFORMATION:**

ROAD(U.S.-DOT)

NOT REGULATED

AIR (IATA)  
NOT REGULATED

SEA (IMDG)  
NOT REGULATED

**15. REGULATORY INFORMATION:**

REVIEWS, STANDARDS, AND REGULATIONS

THIS CHEMICAL IS LISTED ON THE FOLLOWING INVENTORIES:

TSCA AICS CHINA DSL EINECS (225-124-4) ENCS PICCS

LISTED AS CARCINOGEN BY NTP, IARC, OR OSHA: NO

**16. OTHER INFORMATION:**

THE INFORMATION IN THIS MSDS WAS OBTAINED FROM CURRENT AND RELIABLE SOURCES. HOWEVER, THE DATA IS PROVIDED WITHOUT ANY WARRANTY, EXPRESSED OR IMPLIED, REGARDING ITS CORRECTNESS OR ACCURACY. SINCE THE CONDITIONS FOR USE, HANDLING, STORAGE AND DISPOSAL OF THIS PRODUCT ARE BEYOND M&U'S CONTROL, IT IS THE RESPONSIBILITY OF THE USER BOTH TO DETERMINE SAFE CONDITIONS FOR USE OF THIS PRODUCT AND TO ASSUME LIABILITY FOR LOSS, DAMAGE, OR EXPENSE ARISING OUT OF THE PRODUCTS IMPROPER USE. NO WARRANTY EXPRESSED OR IMPLIED REGARDING THE PRODUCT DESCRIBED HEREIN WILL BE CREATED BY OR INFERRED FROM ANY STATEMENT OR OMISSION IN THE MSDS. VARIOUS FEDERAL, STATE, OR PROVINCIAL AGENCIES MAY HAVE SPECIFIC REGULATIONS CONCERNING THE TRANSPORTATION, HANDLING, STORAGE, USE, OR DISPOSAL OF THIS PRODUCT WHICH MAY NOT BE REFLECTED IN THE MSDS. THE USER SHOULD REVIEW THESE REGULATIONS TO ENSURE FULL COMPLIANCE.