



MATERIAL SAFETY DATA SHEET

NAME OF PRODUCT

MSDS DATE: 01 / 11 / 06

FILE NO.:

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: HIGHLIGHTER INK ORANGE, SF-3014 ORANGE

SYNONYMS:

PRODUCT CODES: UNV08853, UNV08863, UNV18863

MANUFACTURER: SINLOHI Co., Ltd

DIVISION: R & D Division

ADDRESS: 2-19-12, Dai, Kamakura, 247-8550, Japan

EMERGENCY PHONE: 0467-43-2124

CHEMTREC PHONE:

OTHER CALLS:

FAX PHONE: 0467-45-2101

CHEMICAL NAME: Acrylonitrile

CHEMICAL FAMILY: Water Base Dispersion of Basic Dyes and Polymer

CHEMICAL FORMULA:

PRODUCT USE: HIGHLIGHTER WRITING INSTRUMENTS

PREPARED BY:

SECTION 1 NOTES:

SECTION 2: COMPOSITION/INFORMATION ON INGREDIENTS

INGREDIENT:

CAS NO.	% WT	ppm	mg/m ³	SARA 313 REPORTABLE
107-13-1	<0.10	40	70	
OSHA PEL-TWA:				
OSHA PEL STEL:				
OSHA PEL CEILING:				
ACGIH TLV-TWA:	2		4.3	
ACGIH TLV STEL:				
ACGIH TLV CEILING:				

SECTION 2 NOTES:

SECTION 3: HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW: Non particular hazards known.

ROUTES OF ENTRY: Inhalation? Yes Dermal? Yes Ingestion? Yes

POTENTIAL HEALTH EFFECTS

EYES: Yes

SKIN: No

INGESTION: Yes

INHALATION: Yes

ACUTE HEALTH HAZARDS: Unknown

CHRONIC HEALTH HAZARDS:

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE:

CARCINOGENICITY

OSHA:

OTHER:

ACGIH:

NTP:

IARC:

SECTION 3 NOTES:

SECTION 4: FIRST AID MEASURES

EYES: Immediately rinse for 15 minutes or longer with a large quantity of clean water. Wash completely, including the underside of the eyelid. See a physician as soon as possible.

SKIN: Promptly wipe off with adhering substance with a cloth. Wash off thoroughly with a large quantity of water and soap or a detergent for use on skin. Do not use a solvent or paint thinner. If any change in appearance is seen or if there is pain, see a physician.

INGESTION: If swallowed by mistake, rest and immediately see a physician. Do not let vomit be swallowed.

INHALATION: If a large quantity of fumes or gas, etc. is inhaled, promptly move to a place with fresh air and rest warmly. If breathing is irregular or stops, administer artificial respiration. Do not let vomit be swallowed. Immediately receive care by a physician.

NOTES TO PHYSICIANS OR FIRST AID PROVIDERS:

SECTION 4 NOTES:

SECTION 5: FIRE-FIGHTING MEASURES

FLAMMABLE LIMITS IN AIR, UPPER: None (% BY VOLUME) LOWER: None

FLASH POINT:

F: None

C: None

METHOD USED: None

AUTOIGNITION TEMPERATURE:

F: None

C: None

NFPA HAZARD CLASSIFICATION

HEALTH:

FLAMMABILITY:

REACTIVITY:

OTHER:

HMIS HAZARD CLASSIFICATION

HEALTH:

FLAMMABILITY:

REACTIVITY:

PROTECTION:

EXTINGUISHING MEDIA: Product itself does not burn. Adapt extinguisher and fire-fighting measures to fire in the environment.

SPECIAL FIRE FIGHTING PROCEDURES:

UNUSUAL FIRE AND EXPLOSION HAZARDS:

HAZARDOUS DECOMPOSITION PRODUCTS:

SECTION 5 NOTES:

SECTION 6: ACCIDENTAL RELEASE MEASURES

ACCIDENTAL RELEASE MEASURES:

- When working, wear appropriate protective gear (gloves, protective mask, apron, goggles, etc.).
- Collect what leaks out into a container that can be sealed, and move it to a safe place.
- Dispose of adhering substances and waste materials, etc. in accordance with the relevant laws and regulations.
- Quickly remove nearby ignition sources, high-temperature bodies, and nearby flammable substances.
- Have appropriate fire extinguishing equipment on hand in case a fire breaks out.
- Collect using implements made of plastic, etc. in order to prevent the occurrence of sparks.
- Collect by absorbing with dry sand, earth, or other inflammable substance. If a large quantity leaks out, prevent the further spread of the leakage by surrounding it with mounded earth.

SECTION 6 NOTES:

SECTION 7: HANDLING AND STORAGE

HANDLING AND STORAGE:

- Handle in a well ventilated location.
- Seal the containers every time.
- Prohibit the nearby use of fire, sparks, and high-temperature materials.
- As a measure against static electricity, ground the equipment, and use explosion proof types of electrical equipment (safety-enhanced models).
- Use spark prevention-type tools.
- Immerse used rags, paint chips, spray dust, etc. in water until they are discarded.
- For work in a sealed location, have adequate local ventilation equipment and wear appropriate protective gear.
- Spontaneous combustion may occur if rags, paper, or rollers to which spray dust or the product adheres are piled up, so keep them immersed in water until they are discarded.
- Avoid direct sunlight.
- Store in a well ventilated location.
- Store far from fire and heat sources.

OTHER PRECAUTIONS:

SECTION 7 NOTES:

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS:

VENTILATION :

RESPIRATORY PROTECTION:

EYE PROTECTION: Wear protective eyeglasses or goggles

SKIN PROTECTION: Wear gloves made of a material that does not allow organic solvents or chemicals to permeate through.

OTHER PROTECTIVE CLOTHING OR EQUIPMENT:

WORK HYGIENIC PRACTICES:

EXPOSURE GUIDELINES:

- Use explosion-proof handling equipment.
- Use ventilation equipment and do not allow fumes to accumulate.
- Use grounded equipment for transporting, scooping up, or stirring liquids.
- Use equipment that does not require high temperature or ignition sources to be placed near where handling is done.
- In the case of indoor painting operation, use either equipment that does not directly expose the operator, such as using automatic painting machines, or use equipment that keeps the operator from exposure, such as local ventilation equipment.
- If operations are done in a sealed location inside a tank, install equipment that can fully ventilate the base of the tank in particular.

STABILITY: Stable

UNSTABLE

STABLE

SECTION 10: STABILITY AND REACTIVITY

SECTION 9 NOTES:

F:
C:

@

VISCOSITY:

MOLECULAR WEIGHT:

WITH WATER: LBS/GAL
WITHOUT WATER: LBS/GAL

VOLATILE ORGANIC COMPOUNDS (VOC):

F:
C:

BY WT/ BY VOL @

PERCENT VOLATILE:

PERCENT SOLIDS BY WEIGHT:

SOLUBILITY IN WATER: Yes

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES (cont)

BASIS (=1):

EVAPORATION RATE: (Buac=1) Same as water

C: 20
F:

F:

@ 1.10-1.20

SPECIFIC GRAVITY (H2O = 1):

C: 20
F:

F:

@ 0.63

VAPOR DENSITY (AIR = 1):

C:
F: 68

F: 68

@ 18

VAPOR PRESSURE (mmHg):

C:
F:

F:

FREEZING POINT:

C:
F:

F:

MELTING POINT:

C: 100
F: 212

F: 212

BOILING POINT:

pH (Other):

pH AS SUPPLIED: 6±1

PHYSICAL STATE: Liquid

ODOR: Slight

APPEARANCE: Orange fluorescent liquid

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

SECTION 8 NOTES:

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SECTION 14 NOTES:

OTHER AGENCIES:

AIR TRANSPORTATION
Obey the provisions of the Aviation Law.

WATER TRANSPORTATION
Obey the provisions of the Vessel Safety Law.

LAND TRANSPORTATION
If falling under the Fire Prevention Law, Labor Safety and Hygiene Law, or Toxic Substances Law, obey the provisions in laws and orders concerning transport

U.S. DEPARTMENT OF TRANSPORTATION
Obey the general precautions in the item on precautions in handling and storage.

SECTION 14: TRANSPORT INFORMATION

SECTION 13 NOTES:

SECTION 13: DISPOSAL CONSIDERATIONS (cont)

RCRA HAZARD CLASS:

- Do not let waste water from washing containers and machinery, etc. flow untreated on the ground or in waste water channels.
- Waste materials arising from waste water treatment incineration, etc., must also be disposed of, or contracted for, in accordance with laws and relevant regulations concerning the disposal and cleanup of waste materials.
- If waste materials, etc. are disposed of by incineration, an incineration furnace without scrubbing equipment must not be used, because harmful gases are produced.

WASTE DISPOSAL METHOD:

SECTION 13: DISPOSAL CONSIDERATIONS

SECTION 12 NOTES:

ECOLOGICAL INFORMATION: Care must be taken that the environment is not affected when a leakage occurs or when discarded.

SECTION 12: ECOLOGICAL INFORMATION

SECTION 11 NOTES:

TOXICOLOGICAL INFORMATION: Care must be taken that the environment is not affected when a leakage occurs or when discarded.

SECTION 11: TOXICOLOGICAL INFORMATION

SECTION 10 NOTES:

- CONDITIONS TO AVOID (STABILITY): None
- INCOMPATIBILITY (MATERIAL TO AVOID): None
- HAZARDOUS DECOMPOSITION OR BY-PRODUCTS: None
- HAZARDOUS POLYMERIZATION: May not occur
- CONDITIONS TO AVOID (POLYMERIZATION): None

DISCLAIMER: The content noted above was prepared based on informational materials, information, and data available at the present time, and the evaluation of hazardoussness and harmfulness is not necessarily adequate, so be careful in handling.

PREPARATION INFORMATION:

Japan Paint Manufacturer Association, "Raw Materials Database"
Japan Paint Manufacturer Association, "Material Safety Data Sheet Guide Book"
Solvents Pocket Book
Hazardous Substances Disaster Prevention and Emergency Handbook
International Chemical Safe Card (ICSC)

OTHER INFORMATION:

SECTION 16: OTHER INFORMATION

SECTION 15 NOTES:

INTERNATIONAL REGULATIONS:

STATE REGULATIONS:

313 REPORTABLE INGREDIENTS:

311/312 HAZARD CATEGORIES:

SARA TITLE III (SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT):

CERCLA (COMPREHENSIVE RESPONSE COMPENSATION, AND LIABILITY ACT):

U.S. FEDERAL REGULATIONS
TSCA (TOXIC SUBSTANCE CONTROL ACT):

SECTION 15: REGULATORY INFORMATION