

# SAFETY DATA SHEET

## Section 1. Identification

Product code : Ink 478

### Relevant identified uses of the substance or mixture and uses advised against

#### Identified uses

Colorant; Printing ink related material; Printing ink.

**Manufacturer / Distributor** : ITW Trans Tech  
475 North Gary Avenue  
Carol Stream, IL 60188  
US: +1 (630) 752-4000

**Emergency telephone number** : +1 (352) 323-3500

## Section 2. Hazards identification

**OSHA/HCS status** : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

**Classification of the substance or mixture** : FLAMMABLE LIQUIDS - Category 3  
ACUTE TOXICITY (oral) - Category 4  
SERIOUS EYE DAMAGE - Category 1  
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3  
SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2

### GHS label elements

#### Hazard pictograms



**Signal word** : Danger

**Hazard statements** : Flammable liquid and vapor.  
Harmful if swallowed.  
Causes serious eye damage.  
May cause drowsiness or dizziness.  
May cause damage to organs through prolonged or repeated exposure.

### Precautionary statements

#### Prevention

: Wear protective gloves. Wear eye or face protection. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Use explosion-proof electrical, ventilating, lighting and all material-handling equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Keep container tightly closed. Use only outdoors or in a well-ventilated area. Do not breathe vapor. Do not eat, drink or smoke when using this product. Wash hands thoroughly after handling.

## Section 2. Hazards identification

- Response** : Get medical attention if you feel unwell. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or physician if you feel unwell. IF SWALLOWED: Call a POISON CENTER or physician if you feel unwell. Rinse mouth. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or physician.
- Storage** : Store locked up. Store in a well-ventilated place. Keep cool.
- Disposal** : Dispose of contents and container in accordance with all local, regional, national and international regulations.
- Hazards not otherwise classified** : None known.

## Section 3. Composition/information on ingredients

**Substance/mixture** : Mixture

### CAS number/other identifiers

| Ingredient name                 | CAS number | %       |
|---------------------------------|------------|---------|
| 2-methoxy-1-methylethyl acetate | 108-65-6   | 25 - 50 |
| 2-butoxyethyl acetate           | 112-07-2   | 25 - 50 |
| C. I. Pigment Black 7           | 1333-86-4  | 5 - 10  |
| Gamma-butyrolactone             | 96-48-0    | 5 - 10  |
| 2-Methoxy-1-Propanol Acetate    | 70657-70-4 | < 1     |

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

**There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.**

**Occupational exposure limits, if available, are listed in Section 8.**

## Section 4. First aid measures

### Description of necessary first aid measures

- Eye contact** : Get medical attention immediately. Call a poison center or physician. Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Chemical burns must be treated promptly by a physician.
- Inhalation** : Get medical attention immediately. Call a poison center or physician. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
- Skin contact** : Get medical attention immediately. Call a poison center or physician. Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Chemical burns must be treated promptly by a physician. Wash clothing before reuse. Clean shoes thoroughly before reuse.
- Ingestion** : Get medical attention immediately. Call a poison center or physician. Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Chemical burns must be treated promptly by a physician. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway.

## Section 4. First aid measures

Loosen tight clothing such as a collar, tie, belt or waistband.

### Most important symptoms/effects, acute and delayed

#### Potential acute health effects

- Eye contact** : Causes serious eye damage.
- Inhalation** : Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness.
- Skin contact** : No known significant effects or critical hazards.
- Ingestion** : Harmful if swallowed. Can cause central nervous system (CNS) depression.

### Indication of immediate medical attention and special treatment needed, if necessary

- Notes to physician** : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
- Specific treatments** : No specific treatment.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

See toxicological information (Section 11)

## Section 5. Fire-fighting measures

### Extinguishing media

- Suitable extinguishing media** : Use dry chemical, CO<sub>2</sub>, water spray (fog) or foam.
- Unsuitable extinguishing media** : Do not use water jet.

**Specific hazards arising from the chemical** : Flammable liquid and vapor. Runoff to sewer may create fire or explosion hazard. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion.

**Hazardous thermal decomposition products** : Decomposition products may include the following materials:  
carbon dioxide  
carbon monoxide  
halogenated compounds

**Special protective actions for fire-fighters** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

**Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

## Section 6. Accidental release measures

### Personal precautions, protective equipment and emergency procedures

- For non-emergency personnel** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Do not breathe vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
- For emergency responders** : If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

## Section 6. Accidental release measures

**Environmental precautions** : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

### Methods and materials for containment and cleaning up

- Small spill** : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
- Large spill** : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

## Section 7. Handling and storage

### Precautions for safe handling

**Protective measures** : Put on appropriate personal protective equipment (see Section 8). Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not ingest. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Take precautionary measures against electrostatic discharges. Empty containers retain product residue and can be hazardous. Do not reuse container.

**Advice on general occupational hygiene** : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

**Conditions for safe storage, including any incompatibilities** : Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

## Section 8. Exposure controls/personal protection

### Control parameters

### Occupational exposure limits

## Section 8. Exposure controls/personal protection

| Ingredient name                                    | Exposure limits   |
|--|---|
| 2-butoxyethyl acetate<br><br>C. I. Pigment Black 7 | <b>ACGIH TLV (United States, 3/2017).</b><br>TWA: 20 ppm 8 hours.<br><b>ACGIH TLV (United States, 4/2014).</b><br>TWA: 3 mg/m <sup>3</sup> 8 hours. Form: Inhalable fraction<br><b>OSHA PEL (United States, 2/2013).</b><br>TWA: 3.5 mg/m <sup>3</sup> 8 hours.<br><b>OSHA PEL 1989 (United States, 3/1989).</b><br>TWA: 3.5 mg/m <sup>3</sup> 8 hours. |

**Appropriate engineering controls** : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

**Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

### Individual protection measures

**Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

**Eye/face protection** : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles and/or face shield. If inhalation hazards exist, a full-face respirator may be required instead.

### Skin protection

**Hand protection** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

**Body protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves.

**Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

**Respiratory protection** : In case of inadequate ventilation wear respiratory protection. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator. Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary.

## Section 9. Physical and chemical properties

### Appearance

|   |  |
|---|--|
| <b>Physical state</b>                               | : Liquid.  |
| <b>Color</b>  | : Black.   |
| <b>Odor</b>   | : Characteristic.  |
| <b>Odor threshold</b>                               | : Not applicable.  |
| <b>pH</b>   | : Not tested   |
| <b>Melting point</b>                                | : Not available.   |
| <b>Boiling point</b>                                | : Lowest known value: 146°C (294°F)  |
| <b>Flash point</b>                                  | : 43°C (109.4°F)   |
| <b>Evaporation rate</b>                             | : Highest known value: 0.03 (2-butoxyethyl acetate) Weighted average: 0.03 compared with butyl acetate |
| <b>Flammability (solid, gas)</b>                    | : Not available.   |
| <b>Lower and upper explosive (flammable) limits</b> | : Not tested   |
| <b>Vapor pressure</b>                               | : Not available.   |
| <b>Vapor density</b>                                | : Not tested   |
| <b>Density</b>                                      | : 1.04 g/cm <sup>3</sup> (8.675 lbs/gal)   |
| <b>Solubility</b>                                   | : Not tested   |
| <b>Partition coefficient: n-octanol/water</b>       | : Not applicable.  |
| <b>Auto-ignition temperature</b>                    | : Not applicable.  |
| <b>Decomposition temperature</b>                    | : Not applicable.  |
| <b>Viscosity</b>                                    | : Not tested   |

### VOC

|  |        |
|--|--------|
| <b>VOC % by W/W</b>                                      | : 70.6 |
| <b>VOC % by V/V</b>                                      | : 0.0  |
| <b>VOC Lbs./Gallon</b>                                   | : 6.1  |
| <b>VOC Lbs./Gallon without Water and exempt solvents</b> | : 6.1  |

## Section 10. Stability and reactivity

|   |   |
|---|---|
| <b>Reactivity</b>                         | : No specific test data related to reactivity available for this product or its ingredients.  |
| <b>Chemical stability</b>                 | : The product is stable.  |
| <b>Possibility of hazardous reactions</b> | : Under normal conditions of storage and use, hazardous reactions will not occur.   |
| <b>Conditions to avoid</b>                | : Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition. |
| <b>Incompatible materials</b>             | : Reactive or incompatible with the following materials:<br>oxidizing materials   |
| <b>Hazardous decomposition products</b>   | : Under normal conditions of storage and use, hazardous decomposition products should not be produced.  |

## Section 11. Toxicological information

### Information on toxicological effects

#### Acute toxicity

| Product/ingredient name         | Result                | Species | Dose                    | Exposure |
|---------------------------------|-----------------------|---------|-------------------------|----------|
| 2-methoxy-1-methylethyl acetate | LD50 Dermal           | Rabbit  | >5 g/kg                 | -        |
| 2-butoxyethyl acetate           | LD50 Oral             | Rat     | 8532 mg/kg              | -        |
|                                 | LD50 Dermal           | Rabbit  | 1500 mg/kg              | -        |
| C. I. Pigment Black 7           | LD50 Oral             | Rat     | 2400 mg/kg              | -        |
|                                 | LD50 Dermal           | Rabbit  | >3 g/kg                 | -        |
| Gamma-butyrolactone             | LD50 Oral             | Rat     | >15400 mg/kg            | -        |
|                                 | LC50 Inhalation Vapor | Rat     | >5100 mg/m <sup>3</sup> | 4 hours  |
|                                 | LD50 Oral             | Rat     | 1540 mg/kg              | -        |

**Conclusion/Summary** : No known significant effects or critical hazards.

#### Irritation/Corrosion

##### Conclusion/Summary

**Skin** : No known significant effects or critical hazards.

**Eyes** : No known significant effects or critical hazards.

**Respiratory** : No known significant effects or critical hazards.

#### Sensitization

##### Conclusion/Summary

**Skin** : No known significant effects or critical hazards.

**Respiratory** : No known significant effects or critical hazards.

#### Mutagenicity

**Conclusion/Summary** : No known significant effects or critical hazards.

#### Carcinogenicity

**Conclusion/Summary** : No known significant effects or critical hazards.

#### Classification

| Product/ingredient name | OSHA | IARC | NTP |
|-------------------------|------|------|-----|
| C. I. Pigment Black 7   | -    | 2B   | -   |
| Gamma-butyrolactone     | -    | 3    | -   |

#### Reproductive toxicity

**Conclusion/Summary** : No known significant effects or critical hazards.

#### Teratogenicity

**Conclusion/Summary** : No known significant effects or critical hazards.

#### Specific target organ toxicity (single exposure)

| Name                            | Category   | Route of exposure | Target organs                |
|---------------------------------|------------|-------------------|------------------------------|
| 2-methoxy-1-methylethyl acetate | Category 3 | Not applicable.   | Narcotic effects             |
| Gamma-butyrolactone             | Category 3 | Not applicable.   | Narcotic effects             |
| 2-methoxypropyl acetate         | Category 3 | Not applicable.   | Respiratory tract irritation |

#### Specific target organ toxicity (repeated exposure)

| Name                  | Category   | Route of exposure | Target organs  |
|-----------------------|------------|-------------------|----------------|
| 2-butoxyethyl acetate | Category 2 | Inhalation        | Not determined |

#### Aspiration hazard

Not available.

## Section 11. Toxicological information

Information on the likely routes of exposure : Not available.

### Potential acute health effects

- Eye contact** : Causes serious eye damage.  
**Inhalation** : Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness.  
**Skin contact** : No known significant effects or critical hazards.  
**Ingestion** : Harmful if swallowed. Can cause central nervous system (CNS) depression.

### Symptoms related to the physical, chemical and toxicological characteristics

- Eye contact** : Adverse symptoms may include the following:  
pain  
watering  
redness
- Inhalation** : Adverse symptoms may include the following:  
nausea or vomiting  
headache  
drowsiness/fatigue  
dizziness/vertigo  
unconsciousness
- Skin contact** : Adverse symptoms may include the following:  
pain or irritation  
redness  
blistering may occur
- Ingestion** : Adverse symptoms may include the following:  
stomach pains

### Delayed and immediate effects and also chronic effects from short and long term exposure

#### Short term exposure

- Potential immediate effects** : Not available.  
**Potential delayed effects** : Not available.

#### Long term exposure

- Potential immediate effects** : Not available.  
**Potential delayed effects** : Not available.

### Potential chronic health effects

- General** : May cause damage to organs through prolonged or repeated exposure.  
**Carcinogenicity** : No known significant effects or critical hazards.  
**Mutagenicity** : No known significant effects or critical hazards.  
**Teratogenicity** : No known significant effects or critical hazards.  
**Developmental effects** : No known significant effects or critical hazards.  
**Fertility effects** : No known significant effects or critical hazards.

### Numerical measures of toxicity

#### Acute toxicity estimates

| Route               | ATE value    |
|---------------------|--------------|
| Oral                | 1835.1 mg/kg |
| Dermal              | 5938.2 mg/kg |
| Inhalation (vapors) | 43.55 mg/l   |



## Section 12. Ecological information

### Toxicity

Not available.

### Persistence and degradability

Not available.

### Bioaccumulative potential

| Product/ingredient name         | LogP <sub>ow</sub> | BCF | Potential |
|---------------------------------|--------------------|-----|-----------|
| 2-methoxy-1-methylethyl acetate | 1.2                | -   | low       |
| 2-butoxyethyl acetate           | 1.51               | -   | low       |
| Gamma-butyrolactone             | -0.566             | -   | low       |

### Mobility in soil






**Soil/water partition coefficient (K<sub>oc</sub>)** : Not available.

**Other adverse effects** : No known significant effects or critical hazards.

## Section 13. Disposal considerations

**Disposal methods** : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Vapor from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

## Section 14. Transport information

|                            | DOT Classification   | TDG Classification   | Mexico Classification  | IMDG   | IATA   |
|----------------------------|--|--|--|--|--|
| UN number                  | UN1210   | UN1210   | UN1210   | UN1210   | UN1210   |
| UN proper shipping name    | PRINTING INK   | PRINTING INK   | PRINTING INK   | PRINTING INK   | PRINTING INK   |
| Transport hazard class(es) | 3<br> | 3<br> | 3<br> | 3<br> | 3<br> |
| Packing group              | III  | III  | III  | III  | III  |
| Environmental hazards      | No.  | No.  | No.  | No.  | No.  |
|                            |  |  |  |  |  |

## Section 14. Transport information

|                               |   |   |   |   |   |
|-------------------------------|---|---|---|---|---|
| <b>Additional information</b> | This product may be re-classified as "Combustible Liquid," unless transported by vessel or aircraft. Non-bulk packages (less than or equal to 119 gal) of combustible liquids are not regulated as hazardous materials. | Product classified as per the following sections of the Transportation of Dangerous Goods Regulations: 2.18-2.19 (Class 3). | - | - | - |
|-------------------------------|---|---|---|---|---|

**Special precautions for user** : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Exemption: This product, is not regulated for ground transportation in packages of 450 L (119 gal) or less.

## Section 15. Regulatory information

**TSCA 8(b) inventory** : Listed

**U.S. Federal regulations** : **TSCA 8(a) PAIR:** 2-methoxy-1-methylethyl acetate; Dimethylpolysiloxane

**Clean Water Act (CWA) 307:** vinyl chloride

**Clean Water Act (CWA) 311:** methyl methacrylate

### SARA 313

|                              | Product name  | CAS number | %       |
|------------------------------|---------------|------------|---------|
| <b>Supplier notification</b> | Glycol Ethers | 112-07-2   | 25 - 50 |

SARA 313 notifications must not be detached from the SDS and any copying and redistribution of the SDS shall include copying and redistribution of the notice attached to copies of the SDS subsequently redistributed.

**Toxics in Packaging (CONEG)** : In compliance.

**Canada inventory** : At least one component is not listed.

### International regulations

**International lists** :

- Australia inventory (AICS):** At least one component is not listed.
- China inventory (IECSC):** At least one component is not listed.
- Japan inventory (ENCS):** At least one component is not listed.
- Korea inventory:** All components are listed or exempted.
- Malaysia Inventory (EHS Register):** At least one component is not listed.
- New Zealand Inventory of Chemicals (NZIoC):** At least one component is not listed.
- Philippines inventory (PICCS):** All components are listed or exempted.
- Taiwan Chemical Substances Inventory (TCSI):** At least one component is not listed.
- Turkey inventory:** At least one component is not listed.
- Europe Inventory:** Please contact your supplier to get the information.

## Section 16. Other information

### National Fire Protection Association (U.S.A.)



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Copyright ©2001, National Fire Protection Association, Quincy, MA 02269. This warning system is intended to be interpreted and applied only by properly trained individuals to identify fire, health and reactivity hazards of chemicals. The user is referred to certain limited number of chemicals with recommended classifications in NFPA 49 and NFPA 325, which would be used as a guideline only. Whether the chemicals are classified by NFPA or not, anyone using the 704 systems to classify chemicals does so at their own risk.

### History

Date of issue/Date of revision : 4/9/2020

Date of previous issue : 1/23/2017

Version : 3

### Key to abbreviations

: ATE = Acute Toxicity Estimate  
BCF = Bioconcentration Factor  
GHS = Globally Harmonized System of Classification and Labelling of Chemicals  
IATA = International Air Transport Association  
IBC = Intermediate Bulk Container  
IMDG = International Maritime Dangerous Goods  
LogPow = logarithm of the octanol/water partition coefficient  
MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)  
UN = United Nations

### References

: Not available.

Indicates information that has changed from previously issued version.

### Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

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