|                                   | SAFETY DATA SHEET  |
|-----------------------------------|--|
| JOY BLACK LHF-70                  | Date of Issue: Mar.20, 2018 Page:1/5   |
| 1. IDENTIFICATION OF THE SU       | BSTANCE/PREPARATION AND COMPANY/UNDERTAKING                                  |
| Product Name                      | : JOY BLACK LHF-70   |
| Product Description               | : Black liquid and slight odor   |
| Use of the Substance/Preparation  | : For industrial use only  |
| Supplier                          | : Mikuni Color Ltd.  |
|                                   | 67 Kokubunnji, Mikunino−Cho, Himeji, Japan                                   |
| Emergency Telephone No.           | : +(81)-792-52-0783  |
| 2. HAZARDOUS IDENTIFICATIO        | N  |
| Classification of the mixture     |  |
| Classification in accordance      | with EC No 1272/2008:  |
|                                   | Skin Irrit.2: H315   |
|                                   | Skin Sens. 1: H317   |
|                                   | Eye Irrit.2 : H319   |
| [GHS LABEL ELEMENTS]<br>Pictogram |  |
| Signal Word                       | : Warning  |
| Hazard Statement                  | : H315: Causes skin irritation   |
|                                   | : H317: May cause an allergic skin reaction                                  |
|                                   | : H319: Causes serious eye irritation  |
|                                   |  |
| Precautionary Statement           |  |
| [Prevention]                      | : P261: Avoid breathing dust/fume/gas/mist/vapours/spray.                    |
|                                   | P264: Wash hands thoroughly after handling.                                  |
|                                   | P272: Contaminated work clothing should not be allowed out of the workplace. |
|                                   | P280: Wear protective gloves/protective clothing/eye protection/             |

 [Emergency Response] : P302+P352: IF ON SKIN: Wash with plenty of water. P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P332+P313: If skin irritation occurs: Get medical advice/ attention. P333+P313: If skin reaction or rash occurs: Get medical advice/ attention. P337+P313: If eye irritation persisits,: Get medical advice/ attentio P362: Take off contaminated clothing and wash before reuse. P363: Wash contaminated clothing before reuse.

[Disposal]

: P501: Dispose of content/ container in accordance with ralated laws and local/regional regulations.

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

This product is a mixture.

| Hazardous Component(s)          |           |           |        |                     |                                |                                      |
|---------------------------------|-----------|-----------|--------|---------------------|--------------------------------|--------------------------------------|
| Component(s)                    | CAS No.   | EU No.    | %(W/W) | Pictograms          | Hazard<br>Statement<br>Code(s) | Hazard Class and<br>Category Code(s) |
| Ethane-1,2-diol                 | 107-21-1  | 203-473-3 | 10-20  | $\langle  \rangle$  | H302                           | Acute Tox.4                          |
|                                 |           |           |        | $\langle \rangle$   | H315                           | Skin Irrit.2                         |
| 2-Amino-2-methylpropanol        | 124-68-5  | 204–709–8 | 0.1-1  |                     | H319                           | Eye Irrit.2                          |
|                                 |           |           |        | -                   | H412                           | Aquatic chronic 3                    |
| A                               | 1006 01 6 | 015 647 6 | 011    | A Carlo             | H314                           | Skin Corr.1B                         |
| Ammonia, aqueous solution (25%) | 1336-21-6 | 215-647-6 | 0.1-1  |                     | H400                           | Aquatic Acute 1                      |
| 2,2',2''–nitrilotriethanol      | 102-71-6  | 203-049-8 | 1–5    |                     | H315                           | Skin Irrit.2                         |
|                                 |           |           |        | $\langle \rangle$   | H319                           | Eye Irrit.2                          |
|                                 |           |           |        | $\langle \rangle$   | H317                           | Skin Sens. 1                         |
|                                 |           |           |        | $\langle \rangle$   | H335                           | STOT SE 3                            |
| 1,2-benzisothiazolin-3-one      | 2634-33-5 | 220-120-9 | <0.05  | $\langle i \rangle$ | H302                           | Acute Tox.4                          |
|                                 |           |           |        |                     | H315                           | Skin Irrit.2                         |
|                                 |           |           |        | $\langle \rangle$   | H317                           | Skin Sens. 1                         |
|                                 |           |           |        |                     | H318                           | Eye Dam.1                            |
|                                 |           |           |        |                     | H400                           | Aquatic Acute 1                      |
| Carbon black                    | 1333-86-4 | 215-609-9 | 5-10   | -                   | -                              | -                                    |

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| 4. FIRST AID MEASURES     | ······································                                   |
|---------------------------|--|
| General information       | : Symptoms of poisoning may even occur after several hours;              |
|                           | therefore medical observation for at least 48 hours after the            |
|                           | accident.  |
| Eye Contact               | : IF IN EYES: Rinse cautiously with water for several minutes.           |
|                           | Remove contact lenses, if present and easy to do.                        |
|                           | Continue rinsing.  |
|                           | If eye irritation persisits,: Get medical advice/ attention.             |
| Skin Contact              | : If skin irritation occurs: Get medical advice/ attention.              |
|                           | If skin reaction or rash occurs: Get medical advice/attention.           |
| Inhalation                | : Remove to fresh air. If not breathing, give artificial respiration.    |
|                           | If breathing is difficult, give oxygen.                                  |
|                           | : Get medical attention immediately.                                     |
| Ingestion                 | : If swallowed, wash out the mouth. Never give anything by mouth         |
|                           | to an unconscious person.  |
|                           | : Get medical attention immediately.                                     |
| 5. FIRE-FIGHTING MEASURE  | S  |
| Fire Fighting             | : Remove all sources of ignition and extinguish with the designated      |
|                           | extinguisher.  |
| Extinguish Media          | : Water spray, foam, dry chemical powder, carbon dioxide.                |
|                           |  |
| 6. ACCIDENTAL RELEASE M   |  |
| In case of small quantity | : Wipe with the meterials such as waste cloth.                           |
| In case of large quantity | : Pick up to the container after leading to the safer place by using     |
|                           | sand, earth, other appropriate barriers.                                 |
|                           | : Prevent from spreading or entering drains, ditches or rivers.          |
| 7. HANDLING AND STORING   |  |
| Handling                  | : Avoid the damage to the container.                                     |
| Storage                   | : Must be stored in a well-ventilated area, away from sunlight, ignition |
|                           | sources and other sources of heat.                                       |
|                           | : Stir the product before use when stored for a long time.               |
| 8. EXPOSURE CONTROLS/F    | PERSONAL PROTECTION  |
| Exposure Limits           | : ACGIH : 5mg/m3 (2,2',2''-nitrilotriethanol)                            |
|                           | : ACGIH : 100mg/m3 (aerosol, upper) (Ethane-1,2-diol)                    |
| Equipment                 | : Install the local exhaust ventilator and eyewash stations.             |
| Personal Protection       | : Wear safety eyewear, protective gloves and protective mask.            |
|                           | . Wear safety cycwear, protective gioves and protective mask.            |
| 9. PHYSICAL AND CHEMICA   |  |
| Appearance                | : Black liquid   |
| Flash Point               | : Not available  |
| Explosion Limit           | : Lower: Not available Upper: Not available                              |
| Boiling Point             | : Approx. 100°C  |
| Density                   | : Not available  |
| Solubility                | : Soluble in water   |
| Volality                  | : Not available  |
|                           |  |

| Solids Content    | : | Not available |
|-------------------|---|---------------|
| PH−Value at 25℃   | : | Not available |
| Viscosity at 25°C | : | Not available |

| 10. STABILITY AND REACTIVITY |  |  |  |
|------------------------------|--|--|--|
| Flammability                 | : None                                 |  |  |
| Combustibility               | : Not applicable                       |  |  |
| Oxidizing Properties         | : Not applicable                       |  |  |
| Self-reactivity/explosibity  | : Not applicable                       |  |  |
| Dust Explosibility           | : Not applicable                       |  |  |
| Stability                    | : Stable under normal conditon of use. |  |  |
| Other Properties             | : Not available                        |  |  |

# 11. TOXICOLOGICAL INFORMATION

| INFORMATION ON TOXICOLO   | GICAL EFFECTS                         |  |  |
|---|---------------------------------------|--|--|
| Acute Toxicity (Oral)   | : Classification not possible         |  |  |
| Acute Toxicity (Skin)   | : Classification not possible         |  |  |
| Acute Toxicity (Inhalation)   | : Classification not possible         |  |  |
| Skin Irritation   | : Causes skin irritation              |  |  |
| Eye Irritation  | : Causes serious eye irritation       |  |  |
| Respiratory sensitization   | : Classification not possible         |  |  |
| Skin sensitization  | : May cause an allergic skin reaction |  |  |
| Carcinogenicity   | : Classification not possible         |  |  |
| Germ cell mutagenicity  | : Classification not possible         |  |  |
| Reproductive toxicity:  | : Classification not possible         |  |  |
| Specific target organ toxicity (STOT) - single exposure : Classification not possible   |                                       |  |  |
| Specific target organ toxicity (STOT) - repeated exposure : Classification not possible |                                       |  |  |
| Aspiration hazard   | : Classification not possible         |  |  |

| 12. ECOLOGICAL INFORMATION |   |
|----------------------------|---|
| Decomposition Nature       | Not available   |
| Accumulative Properties    | Not available   |
| Fish Toxicity              | LC50 (96h, Oryzias latipes) : >100mg/L (as Ethane-1,2-diol) |

| <b>13. DISPOSAL CONSIDERATIONS</b>   | 5   |
|--------------------------------------|---|
| Product :                            | Do not dump this material into sewers, on the ground or into any  |
|                                      | body of water. Comply with all relevant regulations.              |
|                                      | Contact an accredited disposal contractor for the special advice. |
|                                      |   |
| 14. TRANSPORT INFORMATION            |   |
| l and Transport <sup>.</sup> ADR/RID |   |

| Land Transport: ADR/RID         |                                |
|---------------------------------|--------------------------------|
| ADR/RID Class                   | : Not applicable/Not regulated |
| Maritime Transport: IMDG        |                                |
| IMDG Class                      | : Not applicable/Not regulated |
| Air Transport: ICAO-TI/IATA-DGR |                                |
| ICAO-TI/IATA-DGR Class          | : Not applicable/Not regulated |

## JOY BLACK LHF-70

### 15. REGULATORY INFORMATION

### Please refer to any other national measures that may be relevant.

| German Water Hazard Class           | : WGK 1 (as Ethane-1,2-diol)  |
|-------------------------------------|---|
| 16. OTHER INFORMATION               |   |
| Uses and Restrictions<br>Disclaimer | <ul> <li>Use only in industrial manufacturing processes.</li> <li>The information in this document is based on our current<br/>knowledge and is intended to describe the product for the<br/>purposes of health, safety, and environmental requirements only.<br/>It should not therefore be construed as guaranteeing any specific<br/>property of the product.</li> </ul> |