



24546-XXXX

**SAFETY DATA SHEET**

ACCORDING TO EC-REGULATIONS 1907/2006 (REACH), 1272/2008 (CLP) & 453/2010

4.9.19

**SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING**

|  |                               |  |
|--|-------------------------------|--|
| <b>1.1 Product identifier</b>  | Product Name / Product Number | MOLOTOW™ ONE4ALL™ MARKERS / MOLOTOW™ ONE4ALL™ REFILLS                                    |
|  | CAS No.                       | Mixture.   |
|  | EINECS No.                    | Mixture.   |
| <b>1.2 Relevant identified uses of the substance or mixture and uses advised against</b> | Identified Use(s)             | Ink  |
|  | Uses Advised Against          | None known.  |
| <b>1.3 Details of the supplier of the safety data sheet</b>                              | Company Identification        | Feuerstein GmbH - MOLOTOW Distribution Willy-Brandt-Straße 9/2, D-77933 Lahr/Schwarzwald |
|  | Telephone                     | +49 - 7821-92229-0   |
|  | Fax                           | +49 - 7821-92229-99  |
|  | E-Mail (competent person)     | info@molotow.com   |
| <b>1.4 Emergency telephone number</b>  | Languages spoken              | +49 - 7821-92229-0 [8:00 – 17:00 (UTC+1)].<br>German / English                           |

**SECTION 2: HAZARDS IDENTIFICATION**

|   |                             |
|---|-----------------------------|
| <b>2.1 Classification of the substance or mixture</b> |                             |
| <b>2.1.1 Regulation (EC) No. 1272/2008 (CLP)</b>      | Not classified as hazardous |
| <b>2.2 Label elements</b>                             |                             |
| Product Name  |                             |
| Hazard Pictogram(s)                                   | None.                       |
| Signal Word(s)  | None.                       |
| Hazard Statement(s)                                   | None.                       |
| Precautionary Statement(s)                            | None.                       |
| <b>2.3 Other hazards</b>                              | None known.                 |

**SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS****3.1 Substances Not applicable****3.2 Mixtures** Substances in preparations / mixtures  
EC Classification Regulation (EC) No. 1272/2008 (CLP)

| Chemical identity of the substance | %W/W  | CAS No.    | EC No.    | REACH Registration No. | Hazard Statement(s)                   |
|------------------------------------|---|------------|-----------|------------------------|---------------------------------------|
| Ethyl alcohol                      | 1.0 - 4.0   | 64-17-5    | 200-578-6 | None assigned.         | Flam.Liq.2: H225                      |
| Carbon black                       | 9.0 - 10 (BLACK color only)<br>< 0.5 (except BLACK color) | 1333-86-4  | 215-609-9 | None assigned.         | Not classified                        |
| Titanium dioxide                   | < 30 (except BLACK color)                                 | 13463-67-7 | 236-675-5 | None assigned.         | Not classified                        |
| Ethylene glycol                    | < 3.0   | 107-21-1   | 203-473-3 | None assigned.         | Acute Tox.4: H302                     |
| Isopropyl alcohol                  | < 1.0   | 67-63-0    | 200-661-7 | None assigned.         | Flam.Liq.2: H225<br>Eye Irrit.2: H319 |
| Water-soluble Resin                | < 10  | -          | -         | None assigned.         | Not classified                        |
| Water                              | 40 - 90   | 7732-18-5  | 231-791-2 | -                      | Not classified                        |

**3.3 Additional Information**

For full text of H/P phrases see section 16.

**SECTION 4: FIRST AID MEASURES****4.1 Description of first aid measures**  
Inhalation

Remove the victim to the fresh air area. If feel bad, see a doctor.

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|   |  |
|---|--|
| Skin Contact  | Put off the all polluted clothes immediately. Clean with the proper temp. and slow flowing water for over 15 minutes. If have irritate the skin, see a doctor. Call a doctor if feel bad. Before re-use the put off clothes, clean it up and remove the pollution.   |
| Eye Contact   | Put off the contacts if possible, and continue to clean. Clean the eyes carefully for a few minutes. If the eyes get this product, clean the eye immediately and wash away completely. If the cleaning eyes not enough, it may cause irreversible eye damage.<br>If irritate to the eyes continue, see a doctor. |
| Ingestion<br>Expected acute symptom and late symptom                                  | Call a doctor, if feel bad. Rinse the mouth out. Do not have the victim vomit. Sialorrhea, face flash, cough, dizzy, lethargy, headache, sore throat, deliquim animi barf, vomition  |
| <b>4.2 Most important symptoms and effects, both acute and delayed</b>                | No data  |
| <b>4.3 Indication of any immediate medical attention and special treatment needed</b> | Rescuer must wear proper protective equipment according to the situation. Symptom will appear later, so that if the patient exposed excessively, it needs medical follow progress.   |

**SECTION 5: FIRE-FIGHTING MEASURES**

|  |  |
|--|--|
| <b>5.1 Extinguishing media</b><br>Suitable Extinguishing Media                                     | Small fire / Carbon dioxide, dry chemical extinguishing media, water spray, alcoholic resistance foam.<br>Water spray, mist water, alcoholic resistance form.  |
| Unsuitable extinguishing Media<br><b>5.2 Special hazards arising from the substance or mixture</b> | Cylindrical pouring water.<br>The irritative, toxicity and corrosive gas is generated by fire. The container will be burst by heating. If it is not dangerous, move the container from the fire area.<br>If it is impossible to move, cool the container and around by spraying water. After extinguishing a fire, cool the container completely by large quantity of water. |
| <b>5.3 Advice for fire-fighters</b>  | For fighting fire, wear compressed air open-circuit SBCA and protect equipment for chemical. Fight a fire from up wind.  |

**SECTION 6: ACCIDENTAL RELEASE MEASURES**

|  |  |
|--|--|
| <b>6.1 Personal precautions, protective equipment and emergency procedures</b> | The worker must wear proper protector (refer to section 8) not to get the paint on the skin or into eyes. Do not touch the leakage material or walk into it. Keep the proper distance in all direction as the leakage area immediately. No unauthorized entry. If leakage but not occur a fire, wear the occlusive and impervious protect wear. Stay in the wind. Move away from the low ground. Ventilate before enter the sealed area.   |
| <b>6.2 Environmental precautions</b>   | Prevent from influx into the drain ditch, sewer, basement and closed area. Take notice not to affect the environment by discharge the paint into the river. Collect Neutralization: In small quantity case, absorb the leakage   |
| <b>6.3 Methods and material for containment and cleaning up</b>                | material by dry sand and nonflammable material or collect it in the sealed type container then dispose it. In small quantity case, collect the absorbed material by clean antistatic tools. In large quantity case, yard the leakage material by mound to prevent flow out and lead it into safety area then collect it. In large quantity case, water spray lower the steam temperature but it may not inhibit combustion at the sealed area.<br>Containment or Depurant and Equipment: If it is not danger, stop the leakage. Ground all equipment which need for handle the leakage material. Use steam retard foam for lower the steam concentration.<br>Precaution of Second Disaster:Clear away all ignition source immediately (Do not smoking near around, forbid firework and flame).<br>In case large steam generating, retard it by mist spray. Call related agency and ask the help. |
| <b>6.4 Reference to other sections</b>   | See Section: 8, 13   |

**SECTION 7: HANDLING AND STORAGE**

|  |   |
|--|---|
| <b>7.1 Precautions for safe handling</b> | Do the equipment measure described on the section 8 and wear protector. |
|--|---|

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- 7.2 Conditions for safe storage, including any incompatibilities**  
Storage
- 7.3 Specific end use(s)**
- Do the local exhaust ventilation and whole ventilation described on section 8. Prevent leakage the liquid and steam as possible.  
This product irritate the eyes so that care not to get it into the eyes. This product may cause sleep or vertigo, irritate the apparatus respiratorius and damage organ parts so that do not touch, inhale and swallow it. Do not fall, drop, shock or drag the container. Clean hands well after use this product. Use this product outside or well ventilated area only. Avoid touching, refer to the section 10.  
Keep away from high temperature materials spark and fire, and avoid touching oxidizer and organic peroxide.
- Keep the container airtight and stock it in well ventilated place. Stock in the fulfilled and ventilated and cool place. Keep away from oxidant. Keep away from direct sunlight and fire. The inventory location must be fire-proof construction and the floor must be impermeable to prevent permeate the basement and spill to outside. Lock up the container.  
Dangerous goods if mixed: Refer to the section 10.  
Container material: Use the container regulated by fire law and UN transportation law.  
See Section: 1.2

**SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION****8.1 Control parameters****8.1.1 Occupational Exposure Limits**

| Name              | ACGIH (TLV)                           |
|-------------------|---------------------------------------|
| Ethyl alcohol     | 1000ppm                               |
| Carbon black      | 3.5mg/m <sup>3</sup>                  |
| Titanium dioxide  | 10mg/m <sup>3</sup>                   |
| Ethylene glycol   | C 100mg/m <sup>3</sup> , Aerosol only |
| Isopropyl alcohol | 200ppm                                |

**8.1.2 Biological limit value** No data

**8.1.3 PNECs and DNELs** No data

**8.2 Exposure controls****8.2.1 Appropriate engineering controls**

Install the eye washing devices and safety shower where handle or stock this product.

**8.2.2 Individual protection measures, such as personal protective equipment (PPE)**

Eye/face protection  
Skin protection

Wear proper respiratory protect equipment such as gas mask for organic gas (if high concentration, wear air-supplied respirator).  
Check the protect equipment regularly with check sheet.  
Wear the eye protector designated by manufacturer.  
Wear the gloves designated by manufacturer.  
Wear protect boots, oil resistant apron (impermeable and antistatic) and protect clothes (antistatic) designated by manufacturer.  
Clean hands well after use this product.

**8.2.3 Environmental Exposure Controls****SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES****9.1 Information on basic physical and chemical properties**

|   |               |
|---|---------------|
| Appearance                              | Liquid        |
| Odour                                   | Odorless      |
| Odour Threshold                         | No data       |
| pH                                      | No data       |
| Melting Point/Freezing Point            | No data       |
| Initial boiling point and boiling range | Approx. 100°C |

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|  |                   |
|--|-------------------|
| Flash Point                                  | 62°C (Closed cup) |
| Evaporation Rate                             | No data           |
| Flammability (solid, gas)                    | No data           |
| Upper/lower flammability or explosive limits | No data           |
| Vapour pressure                              | No data           |
| Vapour density                               | No data           |
| Relative density                             | No data           |
| Solubility(ies)                              | No data           |
| Partition coefficient: n-octanol/water       | No data           |
| Auto-ignition temperature                    | No data           |
| Decomposition Temperature                    | No data           |
| Viscosity                                    | No data           |
| Explosive properties                         | No data           |
| Oxidising properties                         | No data           |
| <b>9.2 Other information</b>                 |                   |
| Specific gravity (20°C)                      | 1.08 - 1.25       |

**SECTION 10: STABILITY AND REACTIVITY**

|  |   |
|--|---|
| <b>10.1 Reactivity</b>                         | No Data   |
| <b>10.2 Chemical stability</b>                 | Under usually storage condition, it is stable.                    |
| <b>10.3 Possibility of hazardous reactions</b> | No Data   |
| <b>10.4 Conditions to avoid</b>                | No Data   |
| <b>10.5 Incompatible materials</b>             | No Data   |
| <b>10.6 Hazardous decomposition product(s)</b> | Generates harmful gas such as carbon monoxide and carbon dioxide. |

**SECTION 11: TOXICOLOGICAL INFORMATION****11.1 Information on toxicological effects (Substances in preparations / mixtures)**

|  |                 |
|--|-----------------|
| <b>Acute toxicity</b>                    | Not Classified. |
| Ingestion                                | Not Classified. |
| Inhalation                               | Not Classified. |
| Skin Contact                             | Not Classified. |
| <b>Skin corrosion/irritation</b>         | Not Classified. |
| <b>Serious eye damage/irritation</b>     | Not Classified. |
| <b>Respiratory or skin sensitization</b> | Not Classified. |
| <b>Germ cell mutagenicity</b>            | Not Classified. |
| <b>Carcinogenicity</b>                   | Not Classified. |

Note: Regarding toxicological evaluation of carbon black, CLP opinion is that even if adverse effects are seen in animal studies or in-vitro tests, no classification is needed if the mechanism or mode of action is not relevant to humans (1.3.2.4.9.4 in GHS Part 1 Introduction, UN2009). We decide to classify this products as hazardous based on this opinion.

|                                 |                 |
|---------------------------------|-----------------|
| <b>Reproductive toxicity</b>    | Not Classified. |
| <b>STOT - single exposure</b>   | Not Classified. |
| <b>STOT - repeated exposure</b> | Not Classified. |
| <b>Aspiration hazard</b>        | Not Classified. |

**11.2 Other information**

| Name              | IARC | OTHER                             |
|-------------------|------|-----------------------------------|
| Ethyl alcohol     | A4   | LD50(oral, rat) 6200 - 15000mg/kg |
| Carbon black      | 2B   | LD50(oral, rat) 15400mg/kg        |
| Titanium dioxide  | A4   | LD50(oral, rat) > 10000mg/kg      |
| Ethylene glycol   | A4   | LD50(oral, rat) 4000 - 10200mg/kg |
| Isopropyl alcohol | A4   | LD50(oral, rat) 1870 - 5500mg/kg  |

**SECTION 12: ECOLOGICAL INFORMATION**

|   |         |
|---|---------|
| <b>12.1 Toxicity</b>                      | No data |
| <b>12.2 Persistence and degradability</b> | No data |
| <b>12.3 Bioaccumulative potential</b>     | No data |
| <b>12.4 Mobility in soil</b>              | No data |

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|             |   |             |
|-------------|---|-------------|
| <b>12.5</b> | <b>Results of PBT and VPVB assessment</b> | No data     |
| <b>12.6</b> | <b>Other adverse effects</b>              | None known. |

**SECTION 13: DISPOSAL CONSIDERATIONS**

|             |                                |   |
|-------------|--------------------------------|---|
| <b>13.1</b> | <b>Waste treatment methods</b> | Residue Waste: For dispose, follow the related regulation and standard of local governments. Ask the licensed industrial waste disposal company or local governments.   |
| <b>13.2</b> | <b>Additional Information</b>  | For Burning: Spray the incinerator with waste liquid directly or mix with flammable solvent in small quantity to burn. Activated sludge process. Polluted container and package: Clean the container and recycle or treat it in accordance with the related regulation or local governments. If dispose the container, remove the content completely. |

**SECTION 14: TRANSPORT INFORMATION****U.S. DOT (49 CFR 172.101): Not Regulated****IATA: Not Regulated****IMDG: Not Regulated**

|             | <b>ADR/RID</b>   | <b>IMDG</b>   | <b>IATA/ICAO</b> |
|-------------|--|---|------------------|
| <b>14.1</b> | <b>UN number</b>   | Not applicable.   | Not applicable.  |
| <b>14.2</b> | <b>UN proper shipping name</b>   | Not applicable.   | Not applicable.  |
| <b>14.3</b> | <b>Transport hazard class(es)</b>  | Not applicable.   | Not applicable.  |
| <b>14.4</b> | <b>Packing group</b>   | Not applicable.   | Not applicable.  |
| <b>14.5</b> | <b>Environmental hazards</b>   | Not applicable.   | Not applicable.  |
| <b>14.6</b> | <b>Special precautions for user</b>  | See Section: 2  |                  |
| <b>14.7</b> | <b>Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</b> | Not applicable.   | Not applicable.  |
| <b>14.8</b> | <b>Additional Information</b>  | Common: Please follow the section 7. Check if there are no leakage from container and take cargo without falling, dropping and damage.<br>Land Transportation: In case of fall under the Fire Law, Industrial Safety and Health Law, Poisonous Material Control Law follow each relevant mode of transportation.<br>Marine Transportation: Please follow the Law for Safety of Vessel. Air Transportation: Please follow the Aviation Law and regulation of ICAO. |                  |

**SECTION 15: REGULATORY INFORMATION**

|               |   |   |
|---------------|---|---|
| <b>15.1</b>   | <b>Safety, health and environmental regulations/legislation specific for the substance or mixture</b> | Regulatory information with regard to this substance in your country or region should be examined by your own responsibility  |
| <b>15.1.1</b> | <b>EU regulations</b>   | Not applicable.   |
|               | Authorisations and/or Restrictions On Use   | Not applicable.   |
|               | CoRAP Substance Evaluation  |   |
| <b>15.1.2</b> | <b>National regulations</b>   | Outline of Hazardous Material Regulation in Japan.  |
|               | <b>Japan</b>  | Industrial Safety and Health Law: Notice object goods (Article 57, section 2, Enforcement regulation 18-21, appendix 9.)<br>Fire Law: N/A<br>Law for Safety of Vessel: N/A<br>Aviation Law: N/A |
| <b>15.2</b>   | <b>Chemical Safety Assessment</b>   | Not available.  |

**SECTION 16: OTHER INFORMATION**

The following sections contain revisions or new statements: 1-16.

**References:**

JPMA "Data Base for raw material SDS"  
JPMA "MSDS Guide Book [Mixture (for paint)]" 4th version  
JPMA "MSDS Guide Book [Mixture (for paint)]" 4th version-addenda version  
Solvent pocket book  
Raw material manufacturer SDS  
DFGOT (1996)  
IUCLID (2000)

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### LEGEND

|             |  |
|-------------|--|
| TLV         | Threshold Limit Value                  |
| DNEL        | Derived No Effect Level                |
| PNEC        | Predicted No Effect Concentration      |
| PBT         | Persistent, Bioaccumulative and Toxic  |
| vPvB        | very Persistent and very Toxic         |
| Flam.Liq.2  | Flammable liquid Category 2            |
| Carc.2      | Carcinogenicity Category 2             |
| Acute Tox.4 | Acute Toxicity - Oral Category 4       |
| Eye Irrit.2 | Eye Damage / Eye Irritation Category 2 |
| H225        | Highly flammable liquid and vapour.    |
| H302        | Harmful if swallowed                   |
| H319        | Causes serious eye irritation          |
| H351        | Suspected of causing cancer            |

Training advice: Consideration should be given to the work procedures involved and the potential extent of exposure as they may determine whether a higher level of protection is required.

### Disclaimers

The description content of this data sheet is based on the documentation, information and data that we can garner at the present moment so that it might be change depend on new information. And it is recommend for usual handling so that in case of special handling, use it before take safety measure that suitable for your application and usage.  
The description content is information service and not certification.

### Annex to the extended Safety Data Sheet (eSDS)

Not available.

**This safety data sheet is valid for the following MOLOTOW™ ONE4ALL™ product range in markers and refills.**

#### Markers:

ONE4ALL™ 127HS 2mm  
 ONE4ALL™ 127HS-EF Extra Fine 1mm  
 ONE4ALL™ 127HS-CO Crossover 1,5mm  
 ONE4ALL™ 227HS-S Short Body 4mm  
 ONE4ALL™ 227HS 4mm  
 ONE4ALL™ Acrylic Twin 1,5 / 4mm  
 ONE4ALL™ 327HS 4-8mm  
 ONE4ALL™ 427HS 15mm  
 ONE4ALL™ 627HS 15mm

#### Refills:

ONE4ALL™ 30ml Refill  
 ONE4ALL™ 180ml Refill