



Creativity. Our Legacy.™

SAFETY DATA SHEET

24546-XXXX



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

- 1.1 Product identifier**
Product Name / Product Number MOLOTOW™ ONE4ALL™ MARKERS / MOLOTOW™ ONE4ALL™ REFILLS
- CAS No. Mixture.
EINECS No. Mixture.
- 1.2 Relevant identified uses of the substance or mixture and uses advised against**
Identified Use(s) Ink
Uses Advised Against None known.
- 1.3 Details of the supplier of the safety data sheet**
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
- 1.4 Emergency telephone number**
Languages spoken +49 - 7821-92229-0 [8:00 – 17:00 (UTC+1)].
German / English

SECTION 2: HAZARDS IDENTIFICATION

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

SAFETY DATA SHEET

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

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.
Ingestion	If irritate to the eyes continue, see a doctor.
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
4.2 Most important symptoms and effects, both acute and delayed	No data
4.3 Indication of any immediate medical attention and special treatment needed	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

5.1 Extinguishing media Suitable Extinguishing Media	Small fire / Carbon dioxide, dry chemical extinguishing media, water spray, alcoholic resistance foam.
5.2 Unsuitable extinguishing Media Special hazards arising from the substance or mixture	Water spray, mist water, alcoholic resistance form. Cylindrical pouring water. 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. 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.
5.3 Advice for fire-fighters	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

6.1 Personal precautions, protective equipment and emergency procedures	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.
6.2 Environmental precautions	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 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.
6.3 Methods and material for containment and cleaning up	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. Precaution of Second Disaster: Clear away all ignition source immediately (Do not smoking near around, forbid firework and flame). In case large steam generating, retard it by mist spray. Call related agency and ask the help.
6.4 Reference to other sections	See Section: 8, 13

SECTION 7: HANDLING AND STORAGE

7.1 Precautions for safe handling	Do the equipment measure described on the section 8 and wear protector.
--	---

SAFETY DATA SHEET

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

7.2 Conditions for safe storage, including any incompatibilities

Storage

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.

7.3 Specific end use(s)

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 ³
Titanium dioxide	10mg/m ³
Ethylene glycol	C 100mg/m ³ , 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

SAFETY DATA SHEET

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

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
9.2 Other information	
Specific gravity (20°C)	1.08 - 1.25

SECTION 10: STABILITY AND REACTIVITY

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

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects (Substances in preparations / mixtures)	
Acute toxicity	Not Classified.
Ingestion	Not Classified.
Inhalation	Not Classified.
Skin Contact	Not Classified.
Skin corrosion/irritation	Not Classified.
Serious eye damage/irritation	Not Classified.
Respiratory or skin sensitization	Not Classified.
Germ cell mutagenicity	Not Classified.
Carcinogenicity	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.
Reproductive toxicity	Not Classified.
STOT - single exposure	Not Classified.
STOT - repeated exposure	Not Classified.
Aspiration hazard	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

12.1 Toxicity	No data
12.2 Persistence and degradability	No data
12.3 Bioaccumulative potential	No data
12.4 Mobility in soil	No data

SAFETY DATA SHEET

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

12.5	Results of PBT and VPVB assessment	No data
12.6	Other adverse effects	None known.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1	Waste treatment methods	Residue Waste: For dispose, follow the related regulation and standard of local governments. Ask the licensed industrial waste disposal company or local governments. For Burning: Spray the incinerator with waste liquid directly or mix with flammable solvent in small quantity to burn. Activated sludge process.
13.2	Additional Information	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

	ADR/RID	IMDG	IATA/ICAO
14.1 UN number	Not applicable.	Not applicable.	Not applicable.
14.2 UN proper shipping name	Not applicable.	Not applicable.	Not applicable.
14.3 Transport hazard class(es)	Not applicable.	Not applicable.	Not applicable.
14.4 Packing group	Not applicable.	Not applicable.	Not applicable.
14.5 Environmental hazards	Not applicable.	Not applicable.	Not applicable.
14.6 Special precautions for user	See Section: 2		
14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.	Not applicable.	Not applicable.
14.8 Additional Information	Common: Please follow the section 7. Check if there are no leakage from container and take cargo without falling, dropping and damage. 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. 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

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

SAFETY DATA SHEET

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

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