SAFETY DATA SHEET

Issuing Date No data available **Revision Date** 19-Feb-2016 **Revision Number** 02

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND THE COMPANY/UNDERTAKING

GHS product identifier

Product Name **Metalhead®, Metalhead®2 and Paint Refills for Metalhead®**

Other means of identification

Product Code(s) **Metalhead® #10601 Black, #10602 Blue, #10603 Green, #10604 Red, #10605 White, #10606 Yellow, #10607 Orange, #10609 Light Green, #10610 Silver**
Metalhead®2 #10631 Black, #10632 Blue, #10633 Green, #10634 Red, #10635 White, #10636 Yellow, #10637 Orange, #10640 Silver
Paint Refills for Metalhead® #10601R Black, #10602R Blue, #10603R Green, #10604R Red, #10605R White, #10606R Yellow, #10607 Orange, #10609R Light Green, #10610 Silver

UN-Number UN1210

Synonyms None

Recommended use of the chemical and restrictions on use

Recommended Use Printing ink

Uses advised against Keep away from children. Not for use on skin.

Supplier's details

Supplier Address
U-Mark, Inc
102 Iowa Ave.
Belleville, IL 62220
TEL: 618-235-7500

Emergency telephone number

Emergency Telephone Number 24-hour Emergency Phone: Infotrac 1-800-535-5053 (USA & Canada), 1-352-323-3500 (International)

2. HAZARDS IDENTIFICATION

Classification

This product is considered hazardous by the OSHA Hazard Communication Standard 2012 (29 CFR 1910.1200)

Serious Eye Damage/Eye Irritation	Category 2
Specific Target Organ Systemic Toxicity (Single Exposure)	Category 3
Flammable liquids	Category 2

GHS Label elements, including precautionary statements

Emergency Overview

Signal Word **Warning**

Hazard Statements
• Causes serious eye irritation
• May cause drowsiness or dizziness
•
• Highly flammable liquid and vapor.

Appearance Varies **Physical State** Liquid. **Odor** Alcohol

Precautionary Statements

Prevention
• Wash face, hands and any exposed skin thoroughly after handling.
• Avoid breathing dust/fume/gas/mist/vapors/spray.
• Use only outdoors or in a well-ventilated area.
• Keep away from heat/sparks/open flames/hot surfaces - No smoking.
• Keep container tightly closed.
• Ground/bond container and receiving equipment.
• Use explosion-proof electrical/ventilating/lighting/equipment.
• Use only non-sparking tools.
• Take precautionary measures against static discharge.
• Wear protective gloves/protective clothing/eye protection/face protection.
• Keep cool.

General Advice
• None

Eyes
• IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
• If eye irritation persists: Get medical advice/attention.

Skin
• IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

Inhalation
• IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
• Call a POISON CENTER or doctor/physician if you feel unwell.

Fire
• In case of fire: Use CO2, dry chemical, or foam for extinction.

Storage
• Store in a well-ventilated place. Keep container tightly closed.
• Store locked up.

Disposal
• Dispose of contents/container to an approved waste disposal plant.

Hazard Not Otherwise Classified (HNOC)

Not applicable

Other information
Toxic to aquatic life.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS-No	Weight %	Trade secret
Ethanol	64-17-5	25-35	*
Propylene glycol monomethyl ether	107-98-2	20-30	*
Isopropyl alcohol	67-63-0	3-7	*
Ethyl acetate	141-78-6	3-7	*
Titanium dioxide	13463-67-7	0-5	*
Carbon black	1333-86-4	0-5	*
Aluminum	7429-90-5	0-5	*

**The exact percentage (concentration) of composition has been withheld as a trade secret.*

4. FIRST AID MEASURES

Description of necessary first-aid measures

Eye Contact IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician or Poison Control Center immediately.

Skin Contact IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. Get medical attention if irritation develops and persists.

Inhalation IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing Call a POISON CENTER or doctor/physician if exposed or you feel unwell

Ingestion If swallowed: Call a physician or Poison Control Center immediately. Do NOT induce vomiting.

Protection of First-aiders Use personal protective equipment. Remove all sources of ignition.

Most important symptoms/effects, acute and delayed

Most Important Symptoms/Effects Serious eye irritation or damage. Drowsiness. Dizziness.

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

Notes to Physician Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media

Use: Carbon dioxide (CO_2), Dry chemical, Foam.

Unsuitable Extinguishing Media Do not use a solid water stream as it may scatter and spread fire.

Specific Hazards Arising from the Chemical

Flammable. Vapors may form explosive mixtures with air. Most vapors are heavier than air. They will spread along ground and collect in low or confined areas (sewers, basements, tanks). Vapors may travel to source of ignition and flash back.

Explosion Data

Sensitivity to Mechanical Impact None.

Sensitivity to Static Discharge Yes.

Protective Equipment and Precautions for Firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal Precautions ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak. Take precautionary measures against static discharges. All equipment used when handling the product must be grounded. Wear protective gloves/clothing and eye/face protection. Avoid breathing vapors or mists.

Environmental Precautions

Environmental Precautions Prevent product from entering drains. Prevent entry into waterways, sewers, basements or confined areas. Do not flush into surface water or sanitary sewer system. See Section 12 for additional Ecological Information.

Methods and materials for containment and cleaning up

Methods for Containment Dike far ahead of liquid spill for later disposal. A vapor suppressing foam may be used to reduce vapors.

Methods for Cleaning Up Dam up. Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Non-sparking tools should be used. Use personal protective equipment. Sweep up and shovel into suitable containers for disposal.

7. HANDLING AND STORAGE

Precautions for safe handling

Handling Keep away from heat, sparks and open flame. No smoking. Ground/bond container and receiving equipment. Use explosion-proof equipment. Use only non-sparking tools. Take precautionary measures against static discharges. Wear protective gloves/ eye protection/ face protection Avoid breathing vapors or mists. Use only outdoors or in a well-ventilated area.

Conditions for safe storage, including any incompatibilities

Storage Store in a well-ventilated place. Keep cool. Store locked up.

Incompatible Products Strong oxidizing agents.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Control parameters

Exposure Guidelines

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Ethanol 64-17-5	STEL: 1000 ppm	TWA: 1000 ppm TWA: 1900 mg/m³ (vacated) TWA: 1000 ppm (vacated) TWA: 1900 mg/m³	IDLH: 3300 ppm 10% LEL TWA: 1000 ppm TWA: 1900 mg/m³
Propylene glycol monomethyl ether 107-98-2	STEL: 150 ppm TWA: 100 ppm	(vacated) TWA: 100 ppm (vacated) TWA: 360 mg/m³ (vacated) STEL: 150 ppm (vacated) STEL: 540 mg/m³	TWA: 100 ppm TWA: 360 mg/m³ STEL: 150 ppm STEL: 540 mg/m³
Carbon black 1333-86-4	TWA: 3.5 mg/m³	TWA: 3.5 mg/m³ (vacated) TWA: 3.5 mg/m³	IDLH: 1750 mg/m³ TWA: 3.5 mg/m³ TWA: 0.1 mg/m³ Carbon black in presence of Polycyclic aromatic hydrocarbons PAH
Titanium dioxide 13463-67-7	TWA: 10 mg/m³	TWA: 15 mg/m³ total dust (vacated) TWA: 10 mg/m³ total dust	IDLH: 5000 mg/m³
Ethyl acetate 141-78-6	TWA: 400 ppm	TWA: 400 ppm TWA: 1400 mg/m³ (vacated) TWA: 400 ppm (vacated) TWA: 1400 mg/m³	IDLH: 2000 ppm TWA: 400 ppm TWA: 1400 mg/m³

Isopropyl alcohol 67-63-0	STEL: 400 ppm TWA: 200 ppm	TWA: 400 ppm TWA: 980 mg/m³ (vacated) TWA: 400 ppm (vacated) TWA: 980 mg/m³ (vacated) STEL: 500 ppm (vacated) STEL: 1225 mg/m³	IDLH: 2000 ppm 10% LEL TWA: 980 mg/m³ TWA: 400 ppm STEL: 500 ppm STEL: 1225 mg/m³
Aluminum 7429-90-5	TWA: 1 mg/m³ respirable fraction	TWA: 15 mg/m³ total dust TWA: 5 mg/m³ respirable fraction (vacated) TWA: 15 mg/m³ total dust (vacated) TWA: 5 mg/m³ respirable fraction	TWA: 10 mg/m³ total dust TWA: 5 mg/m³ respirable dust

ACGIH TLV: American Conference of Governmental Industrial Hygienists - Threshold Limit Value. OSHA PEL: Occupational Safety and Health Administration - Permissible Exposure Limits. NIOSH IDLH: Immediately Dangerous to Life or Health.

Appropriate engineering controls

Engineering Measures Showers
Eyewash stations
Ventilation systems

Individual protection measures, such as personal protective equipment

Eye/Face Protection Safety glasses with side-shields. If splashes are likely to occur, wear: Goggles.
Skin and Body Protection Protective gloves.
Respiratory Protection If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.

Hygiene Measures Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical State Liquid.
Appearance Varies.
Odor Alcohol.
Odor Threshold No information available.

Property	Values	Remarks/ - Method
pH	No data available	None known
Melting Point/Range	No data available	None known
Boiling Point/Boiling Range	77-120 °C / 171-248 °F	None known
Flash Point	12 °C / 54 °F	Pensky-Martens Closed cup
Evaporation rate	No data available	None known
Flammability (solid, gas)	No data available	None known
Flammability Limits in Air		
upper flammability limit	11.5%	
lower flammability limit	1.6%	
Vapor Pressure	No data available	None known
Vapor Density	No data available	None known
Specific Gravity	0.9788	None known
Water Solubility	No data available	None known
Solubility in other solvents	No data available	None known
Partition coefficient: n-octanol/water	No data available	None known
Autoignition Temperature	No data available	None known
Decomposition Temperature	No data available	None known
Viscosity	No data available	None known

Flammable Properties Highly flammable.

Explosive Properties No data available
Oxidizing Properties No data available

Other information

VOC Content (%) No data available

10. STABILITY AND REACTIVITY

Reactivity

No data available.

Chemical stability

Stable under recommended storage conditions.

Possibility of hazardous reactions

None under normal processing.

Hazardous Polymerization

Hazardous polymerization does not occur.

Conditions to avoid

Heat, flames and sparks.

Incompatible materials

Strong oxidizing agents.

Hazardous decomposition products

Carbon oxides.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information Product does not present an acute toxicity hazard based on known or supplied information.
Inhalation May cause drowsiness and dizziness.
Eye Contact Causes serious eye irritation.
Skin Contact None under normal use conditions.
Ingestion Ingestion may cause irritation to mucous membranes.

Component Information

Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
Ethanol	= 7060 mg/kg (Rat)	-	= 124.7 mg/L (Rat) 4 h
Propylene glycol monomethyl ether	= 5200 mg/kg (Rat)	= 13000 mg/kg (Rabbit)	> 24 mg/L (Rat) 1 h = 54.6 mg/L (Rat) 4 h
Carbon black	-	> 3 g/kg (Rabbit)	-
Titanium dioxide	> 10000 mg/kg (Rat)	-	-
Ethyl acetate	= 5620 mg/kg (Rat)	> 20 mL/kg (Rabbit) > 18000 mg/kg (Rabbit)	-
Isopropyl alcohol	= 4396 mg/kg (Rat)	12800 mg/kg (Rat) 12870 mg/kg (Rabbit)	72.6 mg/L (Rat) 4 h

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms Irritation May cause drowsiness and dizziness

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

Sensitization No information available.
Mutagenic Effects No information available.

Carcinogenicity Ethanol has been shown to be carcinogenic in long-term studies only when consumed and abused as an alcoholic beverage. This product contains titanium dioxide which is classified as a possible carcinogen when present as respirable dust. This is not relevant for this product since it is a liquid. This product contains carbon black in a non-respirable form. Inhalation of carbon black is unlikely to occur from exposure to this product.

Chemical Name	ACGIH	IARC	NTP	OSHA
Ethanol	A3	Group 1	Known	X
Isopropyl alcohol		Group 3		
Titanium dioxide		Group 2B	-	-
Carbon black	A3	Group 2B		X

ACGIH: (American Conference of Governmental Industrial Hygienists)
A3 - Animal Carcinogen

IARC: (International Agency for Research on Cancer)
Group 1 - Carcinogenic to Humans
Group 2B - Possibly Carcinogenic to Humans
Group 3 - Not Classifiable as to its Carcinogenicity to Humans

OSHA: (Occupational Safety & Health Administration)
X - Present

Reproductive Toxicity No information available.
STOT - single exposure May cause drowsiness and dizziness
STOT - repeated exposure No information available.
Aspiration Hazard No information available.

Numerical measures of toxicity - Product
The following values are calculated based on chapter 3.1 of the GHS document:
LD50 Oral 6766 mg/kg; Acute toxicity estimate
LD50 Dermal 17386 mg/kg; Acute toxicity estimate
Inhalation
dust/mist 107.4 mg/L; Acute toxicity estimate

12. ECOLOGICAL INFORMATION

Ecotoxicity
Toxic to aquatic life.

Chemical Name	Toxicity to Algae	Toxicity to Fish	Toxicity to Microorganisms	Daphnia Magna (Water Flea)
Ethanol 64-17-5		LC50 96 h: 12.0 - 16.0 mL/L static (Oncorhynchus mykiss) LC50 96 h: > 100 mg/L static (Pimephales promelas) LC50 96 h: 13400 - 15100 mg/L flow-through (Pimephales promelas)	EC50 = 34634 mg/L 30 min EC50 = 35470 mg/L 5 min	LC50 48 h: 9268 - 14221 mg/L (Daphnia magna) EC50 24 h: = 10800 mg/L (Daphnia magna) EC50 48 h: = 2 mg/L Static (Daphnia magna)
Propylene glycol monomethyl ether 107-98-2		LC50 96 h: 4600-10000 mg/L static (Leuciscus idus) LC50 96 h: = 20.8 g/L static (Pimephales promelas)		EC50 48 h: = 23300 mg/L (Daphnia magna)
Carbon black 1333-86-4	-	-	-	EC50 24 h: > 5600 mg/L (Daphnia magna)
Ethyl acetate 141-78-6	EC50 48 h: = 3300 mg/L (Desmodesmus subspicatus)	LC50 96 h: 220-250 mg/L flow-through (Pimephales promelas) LC50 96 h: 352-500 mg/L semi-static (Oncorhynchus mykiss) LC50 96 h: = 484 mg/L flow-through (Oncorhynchus mykiss)	EC50 = 1180 mg/L 5 min EC50 = 1500 mg/L 15 min EC50 = 5870 mg/L 15 min EC50 = 7400 mg/L 2 h	EC50 48 h: = 560 mg/L Static (Daphnia magna)

Isopropyl alcohol 67-63-0	EC50 96 h: > 1000 mg/L (Desmodesmus subspicatus) EC50 72 h: > 1000 mg/L (Desmodesmus subspicatus)	LC50 96 h: = 11130 mg/L static (Pimephales promelas) LC50 96 h: = 9640 mg/L flow-through (Pimephales promelas) LC50 96 h: > 1400000 µg/L (Lepomis macrochirus)		EC50 48 h: = 13299 mg/L (Daphnia magna)

Persistence and Degradability No information available.

Bioaccumulation No information available.

Chemical Name	Log Pow
Ethanol	-0.32
Propylene glycol monomethyl ether	-0.437
Isopropyl alcohol	0.05
Ethyl acetate	0.6

Other Adverse Effects
No information available.

13. DISPOSAL CONSIDERATIONS

Waste Disposal Methods This material, as supplied, is a hazardous waste according to federal regulations (40 CFR 261).

Contaminated Packaging Empty containers pose a potential fire and explosion hazard. Do not cut, puncture or weld containers. Do not re-use empty containers.

US EPA Waste Number D001

14. TRANSPORT INFORMATION

DOT

UN-Number UN1210
Proper shipping name Printing ink mixture
Hazard Class 3
Packing Group II
Description UN1210, Printing ink mixture, 3, II,
Emergency Response Guide Number 129

TDG

UN-Number UN1210
Proper Shipping Name Printing ink mixture
Hazard Class 3
Packing Group II
Description UN1210, Printing ink mixture, 3, II

MEX

UN-Number UN1210
Proper Shipping Name Printing ink mixture
Hazard Class 3
Packing Group II
Description UN1210, Printing ink mixture, 3, II

ICAO

UN-Number UN1210
Proper shipping name Printing ink mixture
Hazard Class 3
Packing Group II
Description UN1210, Printing ink mixture, 3, II

IATA

UN-Number	UN1210
Proper Shipping Name	Printing ink mixture
Hazard Class	3
Packing Group	II
ERG Code	3L
Description	UN1210, Printing ink mixture, 3, II

IMDG/IMO

UN-Number	UN1210
Proper Shipping Name	Printing ink mixture
Hazard Class	3
Packing Group	II
EmS No.	F-E, S-D
Description	UN1210, Printing ink mixture, 3, II, (12°C c.c.)

RID

UN-Number	UN1210
Proper Shipping Name	Printing ink mixture
Hazard Class	3
Packing Group	II
Classification Code	F1
Description	UN1210, Printing ink mixture, 3, II

ADR

UN-Number	UN1210
Proper Shipping Name	Printing ink mixture
Hazard Class	3
Packing Group	II
Classification Code	F1
Tunnel Restriction Code	(D/E)
Description	UN1210, Printing ink mixture, 3, II, (D/E)

ADN

Proper Shipping Name	Printing ink mixture
Hazard Class	3
Packing Group	II
Classification Code	F1
Special Provisions	163, 640E
Description	UN1210, Printing ink mixture, 3, II
Limited Quantity	5 L
Ventilation	VE01

15. REGULATORY INFORMATION

International Inventories

TSCA	Complies
DSL	Complies

Legend

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

U.S. Federal Regulations

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372:

Chemical Name	CAS-No	Weight %	SARA 313 - Threshold Values %
Aluminum	7429-90-5	0-5	1.0

SARA 311/312 Hazard Categories

Acute Health Hazard	Yes
Chronic Health Hazard	No
Fire Hazard	Yes
Sudden Release of Pressure Hazard	No

Reactive Hazard No

Clean Water Act
This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

CERCLA
This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302):

Chemical Name	Hazardous Substances RQs	Extremely Hazardous Substances RQs	RQ
Ethyl acetate	5000 lb		RQ 5000 lb final RQ RQ 2270 kg final RQ

U.S. State Regulations

California Proposition 65
Ethyl alcohol is only considered a Proposition 65 developmental hazard when it is ingested as an alcoholic beverage. The classification listed below only applies to respirable Titanium dioxide and respirable carbon black.

Chemical Name	CAS-No	California Prop. 65
Ethanol	64-17-5	Developmental
Carbon black	1333-86-4	Carcinogen
Titanium dioxide	13463-67-7	Carcinogen

U.S. State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania	Illinois	Rhode Island
Ethanol	X	X	X		
Propylene glycol monomethyl ether	X	X	X		X
Carbon black	X	X	X	X	X
Titanium dioxide		X			X
Ethyl acetate	X	X	X		X
Isopropyl alcohol	X	X	X		X
Aluminum	X	X	X		X

U.S. EPA Label Information
EPA Pesticide Registration Number Not applicable

16. OTHER INFORMATION

NFPA	**Health Hazard** 2	**Flammability** 3	**Instability** 0	**Physical and Chemical Hazards** -
HMIS	**Health Hazard** 2	**Flammability** 3	**Physical Hazard** 0	**Personal Protection** X

Revised By U-Mark, Inc.
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1-618-235-7500

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General Disclaimer
The information provided on this SDS is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

End of Safety Data Sheet