

MATERIAL SAFETY DATA SHEET

Product Name	MDART ACRYL RESIN
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1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

A. Product Name	MDART ACRYL RESIN
B. Recommended use of the chemical and restrictions on use	
Recommended Use	General Purpose UV Cure Resin
Uses advised against	No information available
C. Details of the supplier of the safety data sheet	
Manufacturer	MOODEUNG CO., LTD.
Address	102, Pyeongdongsandan 6beon-ro, Gwangsan-gu, Gwangju-city, KOREA
Emergency telephone number	+82-62-605-8123

2. HAZARDS IDENTIFICATION

A. Hazard classification	Skin corrosion/irritation : Category 2 Serious eye damage/eye irritation : Category 2 Skin sensitization : Category 1 Specific target organ toxicity (single exposure) : Category 3(respiratory irritation) Chronic aquatic hazard : category 3
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B. GHS label elements, including precautionary statements	
Symbol	



Signal word

Warning

Hazard statements

H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation
H335 May cause respiratory irritation
H412 Harmful to aquatic organisms with long lasting effects.

Precautionary statements

Prevention

P261 Avoid breathing dust/fumes/gas/mist/vapours/spray.
P264 Wash thoroughly after handling.
P271 Use only outdoors or in a well-ventilated area.
P272 Contaminated work clothing should not be allowed out of the workplace.
P273 Avoid release to the environment.
P280 Wear protective gloves/protective clothing/eye protection/face protection.

Response	<p>P302+P352 IF ON SKIN OR EYES: Wash with plenty of water/ P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing. P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do P312 If you feel uncomfortable, call a poison center or physician. P321 Specific treatment P332+P313 If skin irritation occurs: Get medical advice/attention. P333+P313 If skin irritation or a rash occurs: Get medical advice/attention. P337+P313 If eye irritation persists get medical advice/attention. P362+P364 Take off contaminated clothing and wash before reuse.</p>
Storage	<p>P403+P233 Store in a well ventilated place. Keep container tightly closed. P405 Store locked up.</p>
Disposal	<p>P501 (As specified in the relevant legislation) Dispose of the container contents.</p>
C. Hazards not otherwise classified (NFPA)	<p>No information available</p>

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No.	Weight(%)
Mixed Acrylate	Proprietary	> 95
Photoinitiator	Proprietary	< 5

4. FIRST AID MEASURES

A. Eye contact	<p>Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Keep eye wide open while rinsing. If symptoms persist, call a physician (doctor).</p>
B. Skin Contact	<p>If skin irritation or a rash occurs: Get medical advice/attention. Take off contaminated clothing and wash before reuse. Seek immediate medical attention Remove contaminated clothing and shoes and When matter and contact, immediately wash your skin and eyes with running water for 20 minutes or more. When minor skin contact, avoid spreading contamination sites.</p>
C. Inhalation	<p>When exposed to dust or fume: Remove the excess clean air. If you cough or other symptoms, please seek medical attention. If you are not breathing, give artificial respiration. If breathing is difficult, give oxygen.</p>
D. Ingestion	<p>Call a physician immediately.</p>
E. Notes to Physician	<p>All treatments should be based on observed signs and symptoms of distress in the patient.</p>

5. FIRE-FIGHTING MEASURES

A. Suitable extinguishing media	<p>Alcohol-resistant foam, dry chemical, CO2 and water spray Extinguishment by smothering : Dry sand or soil</p>
B. Specific hazards arising from the chemical	<p>Fire will produce irritating and/or toxic gases by pyrolysis or combustion</p>

C. Special protective equipment and precautions for fire-fighters

May be ignited by heat, Bottle or pack can be sparks or flames.
Some of these materials may burn, but none ignite readily
Nonflammability products is not burn, but can be make toxic gases by pyrolysis.
Rescuers need to note the personal protective equipment.
Leave the area and extinguish fire in safe range.
Be careful. Transportation can be melted.
Confine parser and do not scatter the material can be digested ditches for disposal.
Move container from fire area if it can be done without risk.
Extinguish fire in maximum range or use automatic fire apparatus.
Cool containers with water spray until well after the fire is out after extinguishing the fire
Leave from tanks if high-sounds or discolorations are found in power-operated relief valve.
Stay away from burning tank
Leave the material until burned down, If can not use automatic fire apparatus.

6. Accidental release measures

A. Personal precautions, protective equipment and emergency procedures:

Avoid inhalation for gas, steam, mist, fume and spray
Wipe spills immediately that, please follow the precautions.
Remove all sources of ignition.
Stop the leak
Do not touch damaged containers or leaked water without wearing proper protection.
Marks and covered with a plastic sheet spread.
Note that materials and conditions to avoid.

B. Environmental precautions and protective procedures

Prevent entry into waterways, sewers, basements or confined areas.

C. The methods of purification and removal

Take up with sand or other non-combustible absorbent material and place into containers for later disposal.
Follow absorption of the liquid and rinse the contaminated area with detergent and water.

7. Handling and storage

A. Precautions for safe handling:

Avoid inhalation of vapor or mist.
Avoid contact with skin and eyes and do not eat.
Handle with gloves, safety glassess and protecting mask.
Provide a safety shower at any location where skin contact can occur.
Use only in a well-ventilated area enough.
Do not export contaminated clothing out of the workplace.
Handling Avoid heat, flames, sparks and other sources of ignition.
Carefully open the cap.
Keep protected from handling by being affected by the light.

B. Conditions for safe storage

Please keep or store from 5°C~30°C
Stored in a container that does not transmit light, and Store in tightly sealed.
Store in a well-ventilated, dark place away from direct sunlight.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

A. Exposure to chemicals criteria, such as biological exposure limits.	
Domestic regulations	No data available
ACGIH regulations	No data available
Biological exposure limits	No data available
B. Engineering controls	If you encounter a dust, fume or mist, such as air pollution is to install a local exhaust ventilation or general ventilation to keep below exposure limits please take the necessary measures. Facilities storing or using this material, install the safety shower and washing equipment.
C. Personal protective equipment	
Respiratory protection	Wear protective equipment for front-type air-purifying respirator equipped with a canister for the organic solvent.
Eye protection	Wear protective goggles of goggle type is available from arsenic acid or other hazardous liquids.
Hand protection	Wear appropriate chemical resistant gloves to avoid direct contact with the skin.
Body protection	Wear impervious protection.

9. Physical and chemical properties

A. Appearance	
Description	liquid
Color	black, blue, red, white
B. Odor	acrylic
C. Odor threshold	Not available
D. pH	No data available
E. Melting point/freezing point	No data available
F. Initial boiling point and boiling range	No data available
G. Flash point	> 120°C
H. Evaporation rate	No data available
I. Flammability	No data available
J. Upper/lower flammability or explosive limits	No data available
K. Vapor pressure	No data available
L. Vapour density	No data available
M. Relative density	No data available
N. Solubility	1.09 g/mL
O. Partition coefficient : n-octanol/water	No data available
P. Auto-ignition temperature	No data available
Q. Decomposition temperature	No data available
R. Viscosity	< 150cps @25°C
S. Molecular weight	No data available

10. Stability and reactivity

A. Chemical stability; Possibility of hazardous reactions	Stable at normal temperatures and pressure.
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	It contains the initiator in response to being cured upon exposure to ultraviolet light.
	Containers may explode when heated.
	Some of the burn out, but do not ignite easily.
	It may cause a fire, irritating, corrosive and toxic gases.
B. Conditions to avoid	Ultraviolet rays, visible light, infrared light, etc.
	Heat, sparks and flame ignition source
C. Materials to avoid	Combustible material, acid reducing substance, water in the air exposed
D. Hazardous decomposition products	Oxides of carbon, phosphate, harmful vapors

11. TOXICOLOGICAL INFORMATION

A. Information on the likely routes of exposure

Inhalation	No data available
Eye contact	No data available
Skin contact	No data available
Ingestion	No data available

B. Health Hazards

Acute toxicity:

oral No data available

dermal No data available

Inhalation No data available

Skin Corrosion/ Irritation irritant

Serious Eye Damage/ Irritation irritant

Respiratory sensitizer: No data available

Skin Sensitization: Contact Dermatitis and hypersensitive reaction of skin, when repeated contact

Carcinogenicity No data available

Mutagenicity No data available

Reproductive toxicity: No data available

Specific target organ toxicity
(single exposure): respiratory system

Specific target organ toxicity
(repeat exposure): No data available

Aspiration Hazard: No data available

12. Ecological information

A. Aquatic Ecotoxicity:

Fish No data available

Crustacean No data available

Bird No data available

B. Persistence and degradability

Persistence No data available

degradability No data available

C. Bioaccumulative potential

Bioaccumulation No data available

Biodegradation	No data available
D. Mobility in soil:	No data available
E. Other adverse effects	No data available

13. Disposal considerations

A. Disposal method:	Follow federal, state and local regulations.
B. Disposal precaution:	Consider the notice in regulations.

14. Transport information

A. UN Number:	No data available reaging UN
B. UN Proper shipping name:	not applicable
C. Transport Hazard class:	not applicable
D. Packing grade:	not applicable
E. Marine pollutant:	No data available
F. Special precautions	
In case of fire:	not applicable
In case of leakage:	not applicable
G. This product is NOT classified as dangerous for IATA Transport	

15. Regulatory information

A. Occupational Safety and Health Regulation:	not applicable
B. Toxic Chemical Control Act:	not applicable
C. Dangerous Material Safety Management Regulation:	fourth group, third class petroleum (non-water-soluble material)
D. Korea Wastes Control Act	not applicable
E. Other internal and foreign acts	
Domestic regulation	
Persistent Organic Pollutants Control Act	not applicable
Foreign regulation	
U.S . Regulations (OSHA):	not applicable
U.S . Regulations (CERCLA):	not applicable
U.S . Regulations (EPCRA 302):	not applicable
U.S . Regulations (EPCRA 304):	not applicable
U.S . Regulations (EPCRA 313):	not applicable
Substance of Roterdame Protocol:	not applicable
Substance of Stockholme Protocol:	not applicable
Substance of Montreal Protocol:	not applicable
Classification (EU classification)	not applicable
Risk phrases (EU classification) :	not applicable
Safety phrases (EU classification):	not applicable

16. Other informations

A. Source of data	MSDS for a substance is the Korea Occupational Safety and Health Agency (KOSHA), National Institute of Environmental Research Chemical Information Systems (NCIS) edited by reference to various information and providing our experience and knowledge, etc., are some of the modified informations.
B. Creation date	28-04-2015
C. Date of last revision number, and revision	
Number of revision	1
Last creation date	13-07-2016

○ The information(MSDS) contained herein is to the best of our knowledge and belief accurate. However, since the conditions of handling and use are beyond our control, we make no guarantee for result obtained, and assume no responsibility for damages incurred by use of this product. It is the responsibility of the user to comply with all federal, state and local laws and regulations.