

SAFETY DATA SHEET

LMW-2021



Katun PN 56778
ARR JET AQUA 330R HYBRID INKJET PRN

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Trade name: LMW-2021
Chemical description: PRODUCT BASED ON SYNTHETIC AND INORGANIC POLYMERS

1.2. Relevant identified uses of the substance or mixture and uses advised against

Recommended use:

Industrial uses

1.3. Details of the supplier of the safety data sheet

Supplier:

Manufacturer: Arrow System INC
2440 Jerauld Ave
Niagara Falls
NY 14305, USA

Emergency Telephone: +1 716-285-2974

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

EC regulation criteria 1272/2008 (CLP)

The product is not classified as dangerous according to Regulation EC 1272/2008 (CLP).

Adverse physicochemical, human health and environmental effects:

No other hazards

2.2. Label elements

The product is not classified as dangerous according to Regulation EC 1272/2008 (CLP).

Hazard pictograms:

None

Hazard statements:

None

Precautionary statements:

None

Special Provisions:

EUH210 Safety data sheet available on request.

EUH208 Contains 1,2-benzisothiazol-3(2H)-one. May produce an allergic reaction.

EUH208 Contains Mixture of 5-chloro-2-methylisothiazol-3(2H)-one and

2-methylisothiazol-3(2H)-one. May produce an allergic reaction.

Special provisions according to Annex XVII of REACH and subsequent amendments:

None

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2.3. Other hazards
vPvB Substances: None - PBT Substances: None
Other Hazards:
No other hazards

SECTION 3: Composition/information on ingredients

3.1. Substances
N.A.

3.2. Mixtures

Hazardous components within the meaning of the CLP regulation and related classification:

>= 1% - < 3% ethanol; ethyl alcohol

REACH No.: 01-2119457610-43-XXXX, Index number: 603-002-00-5, CAS: 64-17-5, EC: 200-578-6



2.6/2 Flam. Liq. 2 H225



3.3/2 Eye Irrit. 2 H319

SECTION 4: First aid measures

4.1. Description of first aid measures

In case of skin contact:

Wash with plenty of water and soap.

In case of eyes contact:

In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

In case of Ingestion:

Do not under any circumstances induce vomiting. Seek immediately medical advice.

In case of Inhalation:

Remove casualty to fresh air and keep warm and at rest.

4.2. Most important symptoms and effects, both acute and delayed

Not known.

4.3. Indication of any immediate medical attention and special treatment needed

Treatment:

Not known.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media:

Water.

Carbon dioxide (CO₂).

Extinguishing media which must not be used for safety reasons:

Not known.

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- 5.2. Special hazards arising from the substance or mixture
Do not inhale explosion and combustion gases.
- 5.3. Advice for firefighters
Use suitable breathing apparatus .
Collect contaminated fire extinguishing water separately. This must not be discharged into drains.
Move undamaged containers from immediate hazard area if it can be done safely.

SECTION 6: Accidental release measures

- 6.1. Personal precautions, protective equipment and emergency procedures
Wear personal protection equipment.
Remove persons to safety.
See protective measures under point 7 and 8.
- 6.2. Environmental precautions
Do not allow to enter into soil/subsoil. Do not allow to enter into surface water or drains.
Retain contaminated washing water and dispose it.
In case of gas escape or of entry into waterways, soil or drains, inform the responsible authorities.
- 6.3. Methods and material for containment and cleaning up
Suitable material for taking up: absorbing material, organic, sand
Wash with plenty of water.
- 6.4. Reference to other sections
See also section 8 and 13

SECTION 7: Handling and storage

- 7.1. Precautions for safe handling
Avoid contact with skin and eyes, inhalation of vapours and mists.
See also section 8 for recommended protective equipment.
Advice on general occupational hygiene:
Do not eat or drink while working.
- 7.2. Conditions for safe storage, including any incompatibilities
In order to maintain the performance of the product, store at room temperature and protect from frost.
Keep away from food, drink and feed.
Incompatible materials:
None in particular.
Instructions as regards storage premises:
Adequate ventilation in working area.
Packaging suggested:
Plastic drums/IBCs
- 7.3. Specific end use(s)
None in particular

SECTION 8: Exposure controls/personal protection

- 8.1. Control parameters

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ethanol; ethyl alcohol

US - ACGIH (TLV) - STEL(15 min.): 1000 ppm - Notes: A3.

UK - EH40/2005 (WEL) - TWA(8h): 1920 mg/m³, 1000 ppm

DE - TRGS 900 (MAK) - TWA(8h): 960 mg/m³, 500 ppm - STEL(15 min.): 1920 mg/m³, 1000 ppm

DE - TRGS 900 (AGW) - TWA(8h): 960 mg/m³, 500 ppm - STEL(15 min.): 1920 mg/m³, 1000 ppm

FR - VLEP - TWA(8h): 1900 mg/m³, 1000 ppm - STEL(15 min.): 9500 mg/m³, 5000 ppm

ACGIH - STEL: 1000 ppm - Notes: A3 - URT irr

DNEL

ethanol; ethyl alcohol

Worker Industry: 950 mg/m³ - Worker Professional: 950 mg/m³ - Frequency: Long Term, systemic effects Human Inhalation

Worker Industry: 343 mg/kg bw/day - Worker Professional: 343 mg/kg bw/day - Frequency: Long Term, systemic effects Human Dermal

General population: 114 mg/m³ - Frequency: Long Term, systemic effects Human Inhalation

General population: 206 mg/kg bw/day - Frequency: Long Term, systemic effects Human Dermal

General population: 87 mg/kg bw/day - Frequency: Long Term, systemic effects Human Oral

PNEC

ethanol; ethyl alcohol

Fresh Water - Value: 0.96 mg/l

Intermittent release - Value: 2.75 mg/l

Marine water - Value: 0.79 mg/l

STP - Value: 580 mg/l

Freshwater sediments - Value: 3.6 mg/kg dw

Marine water sediments - Value: 2.9 mg/kg dw

08 - Value: 0.63 mg/kg dw

8.2. Exposure controls

Eye protection:

Use close fitting safety goggles. (ref. EN 166, EN 140, EN175).

Protection for skin:

No special precaution must be adopted for normal use.

Protection for hands:

Chemical protective gloves should not be needed when handling this material. Consistent with general hygienic practice for any material, skin contact should be minimized. In case of prolonged contact, the use of protective gloves is recommended, providing comprehensive protection to chemicals (refer to EN 374).

Respiratory protection:

Use respiratory protection where ventilation is insufficient or exposure is prolonged, e.g. (ref. EN 136, EN 140, EN 141, EN 143, EN 149, EN 405).

Thermal Hazards:

None

Environmental exposure controls:

None

Appropriate engineering controls:

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None

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Properties	Value	Method:	Notes:
Appearance and colour:	Milky liquid	--	--
Odour:	Slight	--	--
Odour threshold:	N.D.	--	--
pH:	6,0 - 9,0 @ 25 °C	--	--
Melting point / freezing point:	N.D.	--	--
Initial boiling point and boiling range:	100°C	--	--
Flash point:	> 60°C	--	--
Evaporation rate:	N.D.	--	--
Solid/gas flammability:	N.A.	--	--
Upper/lower flammability or explosive limits:	N.D.	--	--
Vapour pressure:	N.D.	--	--
Vapour density:	N.D.	--	--
Relative density:	1,0 - 1,1kg/L	--	--
Solubility in water:	Dispersible	--	--
Solubility in oil:	N.D.	--	--
Partition coefficient (n-octanol/water):	N.D.	--	--
Auto-ignition temperature:	N.D.	--	--
Decomposition temperature:	N.D.	--	--
Viscosity:	<250mPa.s a 50rpm/25°C	--	--
Explosive properties:	N.D.	--	--
Oxidizing properties:	N.D.	--	--

9.2. Other information

Properties	Value	Method:	Notes:
Miscibility:	N.D.	--	--
Fat Solubility:	N.D.	--	--
Conductivity:	N.D.	--	--
Substance Groups relevant properties	N.D.	--	--

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SECTION 10: Stability and reactivity

- 10.1. Reactivity
Stable under normal conditions
- 10.2. Chemical stability
Stable under normal conditions
- 10.3. Possibility of hazardous reactions
Stable under normal conditions
- 10.4. Conditions to avoid
Stable under normal conditions.
- 10.5. Incompatible materials
Not known
- 10.6. Hazardous decomposition products
Not known

SECTION 11: Toxicological information

- 11.1. Information on toxicological effects
Toxicological information of the product:
 - a) acute toxicity:
LD50 Oral Rat > 2000 mg/kg - source: Calculated data.
 - b) skin corrosion/irritation:
Irritation Skin : repeated and prolonged contacts may cause slight irritation.
 - c) serious eye damage/irritation:
Irritation Eye : repeated and prolonged contacts may cause slight irritation.
 - Toxicological information of the main substances found in the product:
ethanol; ethyl alcohol
 - a) acute toxicity:
LD50 Oral Rat = 10470 mg/kg - source: Literature data
LD50 Skin Rabbit > 20000 mg/kg - source: Literature data
LC50 Inhalation Vapour Rat 117-125 mg/l - Duration: 4h - source: Literature data
 - b) skin corrosion/irritation:
Irritation Skin : Not irritant. - source: Literature data
 - c) serious eye damage/irritation:
Irritation Eye : Causes serious eye irritation. - source: Literature data
 - Other : N.D.
- If not differently specified, the information required in Regulation (EU)2015/830 listed below must be considered as N.D.:
- a) acute toxicity;
 - b) skin corrosion/irritation;
 - c) serious eye damage/irritation;
 - d) respiratory or skin sensitisation;
 - e) germ cell mutagenicity;
 - f) carcinogenicity;
 - g) reproductive toxicity;
 - h) STOT-single exposure;
 - i) STOT-repeated exposure;
 - j) aspiration hazard.

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SECTION 12: Ecological information

12.1. Toxicity

Ecological information of the mixture:

Not classified for environmental hazards

a) Aquatic acute toxicity:

EC50/LC50 > 100 mg/l - aquatic species (according to the criteria of the CLP Regulation).

Ecological information of the main substances found in the mixture:

ethanol; ethyl alcohol

a) Aquatic acute toxicity:

Fish LC50 = 11200 mg/l - Duration h: 96 - Notes: Literature data

Daphnia EC50 > 857 mg/l - Duration h: 48

Algae EC50 > 275 mg/l - Duration h: 72

b) Aquatic chronic toxicity:

Fish NOEC = 250 mg/l

12.2. Persistence and degradability

Ecological information of the mixture:

Biodegradability: The polymers dispersed in water typically have low biodegradability (<50%) but are not considered to be of environmental concern because it does not easily liable to bioaccumulate (log Pow <3) and can be removed in wastewater treatment plants.

Ecological information of the main substances found in the mixture:

ethanol; ethyl alcohol

Biodegradability: Readily biodegradable - Notes: Literature data.

12.3. Bioaccumulative potential

Ecological information of the mixture:

Bioaccumulation: Data not available

Ecological information of the main substances found in the mixture:

ethanol; ethyl alcohol

Test: Log POW: -0.3

12.4. Mobility in soil

Ecological information of the mixture:

Mobility in soil: Data not available

Ecological information of the main substances found in the mixture:

12.5. Results of PBT and vPvB assessment

vPvB Substances: None - PBT Substances: None

12.6. Other adverse effects

None

Use according to criteria of good industrial practice, avoiding product dispersion in the environment.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

If possible, recover the product in accordance with local regulation.

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14. TRANSPORT INFORMATION

- 14.1. UN number
Not classified as dangerous in the meaning of transport regulations.
- 14.2. UN proper shipping name
N.A.
- 14.3. Transport hazard class(es)
N.A.
- 14.4. Packing group
N.A.
- 14.5. Environmental hazards
ADR-Environmental Pollutant: No
IMDG-Marine pollutant: No
- 14.6. Special precautions for user
N.A.
- 14.7. Transport in bulk according to Annex II of Marpol and the IBC Code
N.A.

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture
Dir. 98/24/EC (Risks related to chemical agents at work)
Regulation (EC) n. 1907/2006 (REACH)
Regulation (EC) n. 1272/2008 (CLP)
Regulation (EC) n. 790/2009 (ATP 1 CLP)
Regulation (EU) 2015/830
Regulation (EU) n. 286/2011 (ATP 2 CLP)
Regulation (EU) n. 618/2012 (ATP 3 CLP)
Regulation (EU) n. 487/2013 (ATP 4 CLP)
Regulation (EU) n. 944/2013 (ATP 5 CLP)
Regulation (EU) n. 605/2014 (ATP 6 CLP)
Regulation (EU) n. 2015/1221 (ATP 7 CLP)
Regulation (EU) n. 2016/918 (ATP 8 CLP)
Regulation (EU) n. 2016/1179 (ATP 9 CLP)
Regulation (EU) n. 2017/776 (ATP 10 CLP)
Regulation (EU) n. 2018/669 (ATP 11 CLP)
Regulation (EU) n. 2018/1480 (ATP 13 CLP)
Regulation (EU) n. 2019/521 (ATP 12 CLP)
Dir. 2000/39/EC (Occupational exposure limit values); Dir. 2006/8/CE. Regulation (CE) n. 1907/2006 (REACH).
For non-EU Countries, the Material Safety Data Sheet it is prepared following the main principles of Globally Harmonized System of Classification and Labelling of Chemicals (GHS) which are adopted worldwide.

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15.2. Chemical safety assessment

No Chemical Safety Assessment has been carried out for the mixture/substance.

SECTION 16: Other information

Full text of phrases referred to in Section 3:

H225 Highly flammable liquid and vapour.

H319 Causes serious eye irritation.

Hazard class and hazard category	Code	Description
Flam. Liq. 2	2.6/2	Flammable liquid, Category 2
Eye Irrit. 2	3.3/2	Eye irritation, Category 2

This safety data sheet has been completely updated in compliance to Regulation 2015/830.

This document was prepared by a competent person who has received appropriate training.

Main bibliographic sources:

TOXNET - Databases on toxicology, hazardous chemicals, environmental health, and toxic releases;

NIOSH - Registry of toxic effects of chemical substances (1983) - Occupational Health Guidelines for Chemical Hazards (1995) - Pocket Guide to Chemical Hazards (on line)

OECD - eChemPortal: The Global Portal to Information on Chemical Substances;

CESIO - Human Health and Environmental classification of AE, AES, AS and various surfactant families.

SAX'S Dangerous Properties of Industrial Materials. VIII (1993)

M. Sittig - Handbook of Toxic and Hazardous Chemicals and Carcinogens - III Ed.

E.R. Plunkett - Handbook of Industrial Toxicology - III Ed. 1991

Samson Chem. Pub.-Chemical Safety Sheet working safely with hazardous chemical.

ACGIH - "TLVs and BEIs" - latest edition

The product must be stored, handled and used according to criteria of good industrial practice and to regulations in force.

This leaflet complements the Technical Data Sheet but does not replace it. The information herein contained is given to the best of our knowledge at the time of issue.

Due to the several ways in which the product may be used and the possible interaction with variables not depending on or unknown to the supplier, we also cannot accept any liability whatsoever for any loss or damage however arising from the handling and use of our products.

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road.

ATE: Acute Toxicity Estimate

ATEmix: Acute toxicity Estimate (Mixtures)

CAS: Chemical Abstracts Service (division of the American Chemical Society).

CLP: Classification, Labeling, Packaging.

DNEL: Derived No Effect Level.

EINECS: European Inventory of Existing Commercial Chemical Substances.

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GefStoffVO:	Ordinance on Hazardous Substances, Germany.
GHS:	Globally Harmonized System of Classification and Labeling of Chemicals.
IATA:	International Air Transport Association.
IATA-DGR:	Dangerous Goods Regulation by the "International Air Transport Association" (IATA).
ICAO:	International Civil Aviation Organization.
ICAO-TI:	Technical Instructions by the "International Civil Aviation Organization" (ICAO).
IMDG:	International Maritime Code for Dangerous Goods.
INCI:	International Nomenclature of Cosmetic Ingredients.
KSt:	Explosion coefficient.
LC50:	Lethal concentration, for 50 percent of test population.
LD50:	Lethal dose, for 50 percent of test population.
PNEC:	Predicted No Effect Concentration.
REACH:	Registration Evaluation and Authorization of Chemicals.
RID:	Regulation Concerning the International Transport of Dangerous Goods by Rail.
STEL:	Short Term Exposure limit.
STOT:	Specific Target Organ Toxicity.
SVHC:	Candidate List of Substances of Very High Concerns.
TLV:	Threshold Limiting Value.
TWA:	Time-weighted average
WGK:	German Water Hazard Class.
N.A:	Not Applicable
N.D.:	No Data available