


HPL Additives Limited

MATERIAL SAFETY DATA SHEET

MIKROFINE[®] ADC-130 / RT-115

1 IDENTIFICATION OF SUBSTANCE/PREPARATION AND COMPANY

Identification of the Substance	:	MIKROFINE [®] ADC-130 / RT-115
Use of the Substance	:	As a chemical blowing agent for foaming plastics.
Supplier's name and address	:	HPL Additives Limited 803, Vishal Bhawan 95, Nehru Place New Delhi - 110019 (INDIA)
Contact Numbers	:	Telephone +91- 11- 2643 1522 +91- 11- 2642 1570 Fax +91- 11- 2647 4350 +91- 11- 2646 0981 e-mail hpl@hpl-group.com
Information	:	Product Compliance and Regulatory Affairs
Emergency Phone Number(24h)	:	+91-9910486232

2 HAZARDS IDENTIFICATION

Eye	:	Dust may cause mechanical irritation
Skin	:	May cause skin irritation
Ingestion	:	May cause irritation of the digestive tract
Inhalation	:	May cause respiratory tract irritation
Chronic	:	Repeated or prolonged contact with skin may cause dermatitis. Repeated or prolonged contact may cause skin sensitisation. Repeated or prolonged inhalation exposure may cause asthma.
Other Hazards	:	Dust explosion hazard Explosion hazard if product is heated under confinement.

3 COMPOSITION/INFORMATION ON INGREDIENTS

CAS	:	123-77-3
Main Ingredient	:	Azodicarbonamide
EINECS	:	204-650-8
Classification	:	Hazard symbol Xn; Class 4.1; Packaging group II
Risk Phrases	:	R42 and R44

4 FIRST AID MEASURES

Eye	:	In case of eye contact, wash thoroughly with water. Seek medical advice.
Skin	:	In case of skin contact, wash thoroughly with water. Seek medical advice.
Ingestion	:	If product is swallowed, transfer patient to hospital. Seek medical advice.
Inhalation	:	Take patient into a well-ventilated area. Check for any allergy (asthmatic type) and seek medical advice if necessary.

5 FIRE FIGHTING MEASURES

Extinguishing Media	:	Water, CO ₂ and foam For small fires, use dry chemical, carbon dioxide, water spray or regular foam. Cool containers with flooding quantities of water until well after fire is out. For large fires, flood fire area with water from a distance. Spraying material with plenty of water will result in reduction of heat generated by exothermic decomposition of the product. Do not breathe fumes and gases generated during decomposition or fire. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. Self-contained breathing apparatus must be worn during fire fighting.
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6 ACCIDENTAL RELEASE MEASURES

Use proper personal protective equipment

Product should not be allowed to enter into local drainage or sewer systems.

Any spillage should be removed, preferably by vacuum and stored in labeled containers.

Avoid generating dusty conditions.

Remove all source of ignition. Provide ventilation.

7 HANDLING AND STORAGE

- | | |
|-----------------|--|
| Handling | : Wear protective clothing including breathing protection apparatus and safety goggles, or eye protection.
Wash hands and face thoroughly after handling.
Avoid ingestion and inhalation. |
| Storage | : Keep product pack closed & dry and in original container.
Store in a cool, dry, well-ventilated area away from incompatible substances.
Keep container tightly closed when not in use.
Keep away from direct sunlight and any source of ignition. |

8 EXPOSURE CONTROLS/PERSONAL PROTECTION

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|----------------------------|--|
| Exposure Limits | : For Azodicarbonamide, there is no indicative limit value specified by the commission of European Communities. No MAK or TRK specified by DFG & no TLV specified by ACGIH.

Maximum exposure limit 1.0 mg/m ³ (8.0 hrs. time-weighted average reference) and short-term exposure limit 3.0 mg/m ³ (15 minutes reference period) are established in U.K. |
| ACGIH | : None listed |
| NIOSH | : None listed |
| OSHA-Final PELs | : None listed |
| OSHA-Vacated PELs | : None listed |
| 2 Exposure Controls | : Use adequate ventilation to keep airborne concentrations low.
If vent inadequate use NIOSH/MSHA/European Standard EN 149 approved respirator.

Wear appropriate protective eyeglasses or chemical safety goggles.

Wear appropriate protective gloves and protective clothing to prevent skin exposure

If user develops sensitivity to respiratory tract whilst using product, the user should not be exposed to the product any longer. Allergy to the product normally takes the form of an asthmatic type of attack e.g., wheezing, tightness of breath. Seek medical advice. |

9 PHYSICAL AND TECHNICAL DATA

General Information

Appearance	:	Light yellow free flowing powder
Odour	:	Odourless

Important Health, Safety and Environmental Information

pH	:	Not available
Decomposition temp.	:	>110°C
Flash point	:	Not available
Flammability	:	Flammable
Explosion properties	:	Explosion hazard if heated under confinement
Vapour pressure	:	Not available
Density	:	~1.66 gm/cc
Solubility	:	Insoluble in water
Viscosity	:	Not available
Vapour Density	:	Not available
Evaporation rate	:	Not available
Auto-ignition temperature	:	Not available
Gas released at normal operating temperature	:	Mainly Nitrogen, Carbon di-oxide, Carbon mono-oxide, and Ammonia

10 STABILITY AND REACTIVITY

Conditions to avoid	:	Excess heat, spark and open flame.
Materials to avoid	:	Strong oxidising agents, incompatible materials and strong oxidants. Incompatible with acids and acid salts, Guanidine Nitrate, Ammonium Nitrate and Zinc Chloride.
Hazardous decomposition products	:	Although azodicarbonamide modified decomposes quickly above 110°C, it may decompose slowly above 80°C; composition of gaseous products and solid residues will vary with temperature and is time/pressure dependent. In a fire situation, the product will release dense fumes. Risk of explosion if heated under confinement.

11 TOXICOLOGICAL INFORMATION

May be mildly irritating to eyes and skin. It has got a low toxicity. Inhalation of dust can cause lung sensitisation. Azodicarbonamide is a substance of low toxicity. Following are the toxicological information for azodicarbonamide :

Oral toxicity	:	LD 50 (rats)	>6800mg/kg
Dermal toxicity	:	LD 50 (rabbits)	>2000mg/kg
Inhalation toxicity	:	LC 50 (rats)	>200 mg/L(hr)
Genotoxicity		Ames Salmonella Positive
		CHO-HGPRT Negative
		Rat hepatocyte UDS Negative
		Mouse Micronucleus Negative
Carcinogenicity	:	Not listed by ACGIH, IARC, NIOSH, NTP or CA Prop 65	
Epidemiology	:	No information available	
Teratogenicity	:	No information available	
Reproductive effects	:	No information available	
Neurotoxicity	:	No information available	
Mutagenicity	:	Identified as a mutagen in bacterial system, but it was not mutagenic in mammalian cell <i>in vitro</i> test systems or in two mammalian assays <i>in vivo</i> using bone marrow.	

12 ECOLOGICAL INFORMATION

Azodicarbonamide is slightly hazardous to water. It is considered to be slightly toxic to non-toxic to aquatic species and is readily biodegradable...biodegradability (30 days).....around 70 %

Fathead minnow (<i>Pimephales promelas</i>)	:	48 hr LC 50 ...>50mg/L
Water flea (<i>Daphnia magna</i>) immobilization	:	48 hr EC50.....11mg/L

13 DISPOSAL CONSIDERATIONS

Small quantities can be incinerated in a suitable incinerator, large quantities need special treatment. Supplier should be requested to supply information.

14 TRANSPORTATION INFORMATION

ADR/RID/DOT/IMO/IMDG	
UN NUMBER	: 3242
Hazard Class	: 4.1
Packaging group	: II
Proper Shipping Name	: AZODICARBONAMIDE MODIFIED

15 REGULATORY INFORMATION

INVENTORY STATUS

CAS# 123-77-3 is listed in the following chemical inventories

TSCA	EINECS	AICS
DSL	ENCS	ECL
SWISS	PICCS	ASIA-PAC

EUROPEAN/INTERNATIONAL REGULATIONS

European Labeling in Accordance with EC Directives

Hazard Symbol

Xn : Harmful

Risk Phrases

R42 : May cause sensitisation by inhalation.
R44 : Risk of explosion if heated under confinement

Safety Phrases

S15 : Keep away from heat
S16 : Keep away from sources of ignition. No smoking
S22 : Do not breathe dust
S24 : Avoid contact with skin
S26 : In case of contact with eyes, rinse immediately with plenty of water and seek medical advice
S27 : Take off immediately all contaminated clothing
S36/37/39 : Wear suitable protective clothing and eye/face protection
S41 : In case of fire and/or explosion do not breathe fumes

US FEDERAL

TSCA : CAS# 123-77-3 is listed on the TSCA inventory.

WHMIS

: Azodicarbonamide has a WHMIS classification of B4, D2A

16 OTHER INFORMATION**NFPA Rating (Estimated)**

Health	:	2
Flammability	:	1
Instability	:	2

Lung sensitization : Some people can develop allergy when they work with powdered azodicarbonamide. Allergy symptoms can manifest as asthmatic attacks which can be seen in the form of wheezing, shortness of breath and tightness of chest. The attack may manifest a few hours after working with the powder and may last 1-2 hours. Recovery is complete within 24 hours. If lung sensitisation occurs, the affected person should be removed from further exposure to azodicarbonamide.

This document contains important information to ensure the safe storage, handling and use of this product. The information in this document should be brought to the attention of the person in your organisation responsible for advising on safety matters.

The information given in this document is only a recommendation believed to be reliable and is given in good faith but without warranty. Our advice does not release users from the obligation of checking its validity and to test our products as to their suitability for the intended use. Specified properties mentioned in this document are based on our historical production performance and these properties or the whole document is subject to change without any prior notice at our sole discretion. We are under no obligation to call back earlier issued documents.