In accordance with Globally Harmonized System of Classification and Labelling of Chemicals (GHS)- Chapter 1.5 and Annex 4

SAFETY DATA SHEET

Product: CATALYST FOR PRIMER PU REVOLUTION HS 5000

Revision: 02	Date: 05/27/2022	Pages: 1/9

1 - IDENTIFICATION

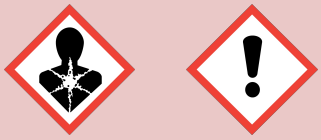
GHS Product identifier:	CATALYST FOR PRIMER PU REVOLUTION HS 5000
Other means of identification:	044662-00
Recomended use of the chemical:	INDUSTRIAL USE.
Specific restrictions on use:	There are not known restrictions on use of the product.
Suplier`s details:	ANJO QUIMICA DO BRASIL LTDA
Address:	Acesso Estadual Rio Maina, nº 1165, Bairro Vila Macarini CEP: 88818-800, Criciúma - SC - BR
Phone number(s):	(48) 34618000 (48) 34618049
Emergency phone number:	CIATox/SC (Centro de Informação e Assistência Toxicológica de Santa Catarina) 08006435252

2 - HAZARD IDENTIFICATION

Classification of the substance or mixture:	Respiratory Sensitization - Category 1 Skin Sensitization - Category 1 Specific Target Organ Toxicity – Single Exposure - Category 3 - Narcotic and Category 3 - Respiratory Hazardous to the Aquatic Environment - Acute Hazard - Category 3
Classification system adopted:	Globally Harmonized System of Classification and Labeling of Chemicals (GHS), United Nations.

GHS label elements, including precautionary statements

Pictograms:



Signal word:	DANGER
Hazard statement(s):	H317 May cause an allergic skin reaction. H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled. H335 May cause respiratory irritation. H336 May cause drowsiness or dizziness. H402 Harmful to aquatic life.
Precautionary statement(s):	**PREVENTION:** P261 Avoid breathing dust/fume/gas/mist/vapours/spray. 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 and hearing protection. P284 In case of inadequate ventilation, wear respiratory protection.

RESPONSE TO EMERGENCY:
P302 + P352 IF ON SKIN: Wash with plenty of water.
P304 + P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P319 Get medical help if you feel unwell.
P321 Specific treatment.
P333 + P317 If skin irritation or rash occurs: Get medical help.
P342 + P316 If experiencing respiratory symptoms: Get emergency medical help immediately.
P362 + P364 Take off contaminated clothing. And wash it before reuse.

STORAGE:
P403 + P233 Store in a well-ventilated place. Keep container tightly closed.
P405 Store locked up.

DISPOSITION:
P501 Dispose of contents and container in accordance with local regulations.

Other hazards which do not result in classification:	The product has no other hazards.

3 - COMPOSITION/INFORMATION ON INGREDIENTS

MIXTURE

Components contributing to the hazard:	Desmodur wf 60 (CAS Not applicable): 34.80 - 100% [1]; Butyl acetate (CAS 123-86-4): 9.65 - 28.95%; Desmodur n 75 (CAS Not applicable): 5.55 - 16.65% [2]; [1]This product contains as substances or impurities the following substances with occupational exposure limit: 1,6-hexamethylene diisocyanate, Butyl acetate and Ethyl acetate. [2]This product contains as substances or impurities the following substances with occupational exposure limit: 1,6-hexamethylene diisocyanate.

4 - FIRST-AID MEASURES

Routes of exposure

Inhalation:	Remove victim to fresh air.
Skin:	Wash exposed skin with sufficient amount of water to remove the material.
Eye:	Wash carefully with water for several minutes. In case of use of contact lenses, remove them, if possible. Keep washing. If eyes irritation continues: Contact a doctor. Bring this SDS.
Ingestion:	Do not induce vomiting. Wash the exposed persons mouth with wate. If the victim feels unwell, contact a TOXICOLOGICAL INFORMATION CENTER or a doctor. Bring this SDS.
Most important symptoms/effects, acute and delayed:	May cause an allergic skin reaction with pruritus and dermatitis. May cause allergy or asthma symptoms or breathing difficulties if inhaled with shortness of breath and tiredness. May cause drowsiness or dizziness, may cause dizziness and nausea. May cause respiratory irritation, may cause cough and sneezing.

Indication of immediate medical attention and special treatment needed, if necessary:	If necessary, provide symptomatic treatment.

5 - FIRE-FIGHTING MEASURES

Extinguishing Media:	Appropriate: carbon dioxide (CO_2), foam, water mist and powder. Inappropriate: water jet directly.
Specific hazards arising from the chemical:	The combustion of the chemical containers may form toxic and irritant gases such as carbon monoxide and carbon dioxide. Vapors may are heavier than air and tend to accumulate in low or confined areas, such as sewers and basements. Containers may explode if heated.
Special protective actions for fire-fighters:	Use self-contained breathing apparatus (SCBA) operated in positive pressure mode and complete protective clothing. Containers and tanks involved in the fire should be cooled with water mist.

6 - ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel:	Do not smoke. Avoid exposure to the product. If necessary, use personal protective equipment as described in Section 8.
For emergency responders:	Wear complete PPE with safety glasses, safety gloves, suitable protective clothing and closed shoes. In case of leakage, where exposure is high, it is recommended to use a suitable respiratory protection mask.
Environmental precautions:	Avoid that the spilled material reaches waterways or sewage system.
Method and materials for containment and cleaning up:	Use water mist or vapor suppressing foam to reduce the dispersion of vapors. Use natural barriers or spill containment. Collect spilled material and put it into containers. Adsorb the remaining product with dried sand, vermiculite or any other inert material. Put the adsorbed material in appropriate containers and remove them to a safe place. Use tools that do not cause sparks to collect absorbed material.

7 - HANDLING AND STORAGE

Precautions for safe handling

Safe handling of the substance or mixture:	Handle in a well ventilated area or with general system of ventilation/local exhaust. Avoid vapors and mists formation.
General hygiene:	Wash hands and face thoroughly after handling and before eating, drinking, smoking or going to the bathroom.

Conditions for safe storage, including any incompatibilities

Technical measures for prevention of fire and explosion:	It is not expected that the product presents a fire or explosion hazard. Use personal protective equipment as described in Section 8.
Adequate conditions:	Store in a well ventilated place away from sunlight. Keep container closed. Keep away from high temperatures.

Packaging compatibilities:	Similar to the original packaging.
Inadequate packaging materials:	There are not known unsuitable material of the product.

8 - EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Occupational exposure limit:	The values below apply to workplaces. - 1,6-hexamethylene diisocyanate: ACGIH - TLV - TWA: 0.005 ppm. - Ethyl acetate: OSHA - PEL - TWA: 400 ppm; 1400 mg/m³; NIOSH - REL - TWA: 400 ppm; ACGIH - TLV - TWA: 400 ppm. - Butyl acetate: OSHA - PEL - TWA: 150 ppm; 710 mg/m³; NIOSH - REL - TWA: 150 ppm; NIOSH - REL - STEL: 200 ppm; ACGIH - TLV - TWA: 50 ppm; ACGIH - TLV - STEL: 150 ppm.
Biological limit:	- 1,6-hexamethylene diisocyanate: ACGIH - BEI: Determinant: 1,6-Hexamethylene diamine in urine. Sampling Time: End of shift. Index: 15.00 µg/g creatinine. Ns. Ns: The determinant is nonspecific, since it is also observed after exposure to other chemicals.
Other limits and values:	- Ethyl acetate: IDLH (NIOSH, 2010): 2000 ppm.
Appropriate engineering controls:	Promote mechanical ventilation and exhaust system to outside. These acts help reducing the exposition to the product. Maintain atmospheric concentrations of the constituents of the product below occupational exposure limits indicated.

Individual protection measures, such as personal protective equipment (PPE)

Eye/face protection:	Safety glasses.
Skin protection:	Closed shoes and suitable protective clothing. Appropriate protective gloves.
Respiratory protection:	A risk assessment should be performed for proper definition of respiratory protection, in view of the product use conditions.
Thermal hazards:	It does not present thermal hazards.

9 - PHYSICAL AND CHEMICAL PROPERTIES

Aspect:	Liquid.
Color:	Not available.
Odour:	Characteristic.
Melting	Not available.

point/freezing point:	
Boiling point or initial boiling point and boiling range:	Not available.
Flammability:	Not available.
Lower and upper explosion limit/flammability limit:	Not available.
Flash point:	Not available.
Auto-ignition temperature:	Not available.
Decomposition temperature:	Not available.
pH:	Not available.
Kinematic viscosity:	Not available.
Solubility(ies):	Water immiscible.
Partition coeficient n-octanol/water (log value):	Not available.
Vapour pressure:	Not available.
Relative vapour density:	Not available.
Density and/or relative density:	Not available.
Particle characteristics:	Not applicable.
Other information:	Absolute density: ≅ 1 g/cm³.

10 - STABILITY AND REACTIVITY

Reactivity:	Reactivity is not to be expected under normal conditions of temperature and pressure
Stability:	Stable product under normal conditions of temperature and pressure.
Possibility of hazardous reactions:	Ethyl acetate: Reacts dangerously with strong oxidizing agents and chlorosulfonic acid, which can start a fire or explosion. Butyl acetate: Contact with nitrates, strong oxidizing agents, strong bases and strong acids can cause fire and explosion. Ignition occurs when butyl acetate is reacted with potassium t-butoxide.
Conditions to avoid:	Elevated temperatures. Contact with incompatible materials. Humidity.
Incompatible material:	Acetaldehyde, Acetanilide, Acetonitrile, Acids, Alcohols, Alkali, Amines, Copper, Hydrochloric acid, Metalic acetylenes, Nitrates, Oxidizing Agents, Radioactive materials, Spontaneous combustion of materials, Vinyl acetate and Water.
Hazardous	There are no known hazardous decomposition products.

decomposition products:	

11 - TOXICOLOGICAL INFORMATION

Acute toxicity:	Product not classified as acute toxic. ATEmix Oral: > 5000 mg/kg. ATEmix Dermal: > 5000 mg/kg. ATEmix Dusts and mists (4h): > 5 mg/L.
Skin corrosion/irritation:	It is not expected that the product causes skin irritation.
Serious eye damage/irritation:	It is not expected that the product causes eye irritation.
Respiratory or skin sensitization:	May cause an allergic skin reaction with pruritus and dermatitis. May cause allergy or asthma symptoms or breathing difficulties if inhaled with shortness of breath and tiredness. The ingredient 1,6-hexamethylene diisocyanate, classified as respiratory sensitizer - category 1, is in concentration < 1% and does not contribute to this classification of the product. The ingredient 1,6-hexamethylene diisocyanate, classified as skin sensitizer - category 1, is in concentration < 1% and does not contribute to this classification of the product.
Germ cell mutagenicity:	It is not expected that the product presents germ cell mutagenicity.
Carcinogenicity:	It is not expected that the product presents carcinogenicity.
Reproductive toxicity:	It is not expected that the product presents reproductive toxicity.
STOT - Single exposure:	May cause drowsiness or dizziness, may cause dizziness and nausea. May cause respiratory irritation, may cause cough and sneezing.
STOT - Repeated exposure:	It is not expected that the product presents specific target organ toxicity by repeated exposure.
Aspiration Hazard:	It is not expected that the product presents aspiration hazard.

12 - ECOLOGICAL INFORMATION

Toxicity:	Harmful to aquatic life. Information regarding to: - Butyl acetate: LC_{50} (*Danio rerio*, 96h): 62 mg/L.
Persistence and degradability:	It is expected that the product presents persistence and it is not considered readily biodegradable.
Bioaccumulative potential:	Presents low bioacumulative potencial in aquatic organisms. Information regarding to: - Butyl acetate: BCF: 15.3 log K_{ow}: 1.78.
Mobility in soil:	Not determined.
Other adverse	There are not known other environmental effects for this product.

effects:

13 - DISPOSAL CONSIDERATIONS

Disposal methods

Must be disposed of as hazardous waste in compliance with local regulations. The treatment and disposal should be evaluated for each specific product.
Keep the product remains in its original and properly closed containers. Disposal should be performed as established for the product.

14 - TRANSPORT INFORMATION

Road:	UN - United Nations: Model Regulations: • Recommendations on the Transport of Dangerous Goods.
UN number:	1263
Proper shipping name:	PAINT RELATED MATERIAL
Primary risk class or division:	3
Subsidiary risk class or division:	NA
Packing group:	II
Railway regulations:	COTIF - Convention concerning International Carriage by Rail: • Appendix C: RID - Regulations concerning the International Carriage of Dangerous Goods by Rail
UN number:	1263
Proper shipping name:	PAINT RELATED MATERIAL
Primary risk class or division:	3
Subsidiary risk class or division:	NA
Packing group:	II
Sea:	IMO - International Maritime Organization: • IMDG Code - International Maritime Dangerous Goods Code.
UN number:	1263
Proper shipping name:	PAINT RELATED MATERIAL
Primary risk class or division:	3
Subsidiary risk class or division:	NA
Packing group:	II
EmS:	F-E,S-E
Environmental	The product is not considered a marine pollutant for transportation.

hazards:	
Air:	IATA - International Air Transport Association: • DGR - Dangerous Goods Regulation.
UN number:	1263
Proper shipping name:	PAINT RELATED MATERIAL
Primary risk class or division:	3
Subsidiary risk class or division:	NA
Packing group:	II
Special precautions for user:	Not applicable.

15 - REGULATORY INFORMATION

Convention concerning Safety in the use of Chemicals at Work (Convention 170) - International Labour Organization, 1990.

16 - OTHER INFORMATION

This SDS was prepared based on current knowledge about the proper product handling and under normal conditions of use, in accordance with the application specified on the packaging. Any other use of the product involving their combination with other materials, and use various forms of those indicated, are the responsibility of the user. Warns that the handling of any chemical substance requires the prior knowledge of its hazards for the user. In the workplace it is for the user company's product promotes training of its collaborators about the possible risks arising from exposure to the chemical.

Elaborated May 2022.
Change Control:

Version	Elaboration	Changes
02	05/27/2022	Change in composition. Change in section: 1, 2, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15 and 16.

Abbreviations:
ACGIH - American Conference of Governmental Industrial Hygienists;
ATEmix - Acute Toxicity Estimate of the mixture;
BCF - Bioconcentration factor;
BEI - Biological Exposure Index;
CAS - Chemical Abstracts Service;
EC - European Community;
EEC - European Economic Community;
IDLH - Immediately Dangerous to Life or Health;
K_{ow}- Octanol/Water partition coefficient;
LC_{50} - Lethal Concentration 50%;
NIOSH - National Institute for Occupational Safety and Health;

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OSHA - Occupational Safety & Health Administration;
PEL - Permissible Exposure Limit;
REL - Recommended Exposure Limit;
STEL - Short Term Exposure Limit;
TLV - Threshold Limit Value;
TWA - Time Weighted Average;
UN - United Nations.

Bibliographic references:

GHS - GLOBALLY HARMONIZED SYSTEM OF CLASSIFICATION AND LABELLING OF CHEMICALS. 8th rev. ed. New York: United Nations, 2019.

ACGIH - AMERICAN CONFERENCE OF GOVERNMENTAL INDUSTRIALS HYGIENISTS. TLVs® and BEIs®: Based on the Documentation of the Threshold Limit Values (TLVs®) for Chemical Substances and Physical Agents & Biological Exposure Indices (BEIs®). Cincinnati-USA, 2020.

REACH - REGISTRATION, EVALUATION, AUTHORIZATION AND RESTRICTION OF CHEMICALS. Commission Regulation (EC) No 1272/2008 of December 2008 amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorization and Restriction of Chemicals. Available at: < http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2008:353:0001:1355:en:PDF >. Access in: May. 2022.