

SAFETY DATA SHEET

1. Substance/preparation and company identification

PRODUCT CODE : N1601
PRODUCT NAME : MAX EFFORT - Green

Recommended use : Sprayable

MHM IMPORT - EXPORT AND PRODUCTION COMPANY LIMITED
Address: No. 9, Lane 28/76 Xuan La Street, Tay Ho District, Hanoi City, Vietnam
Factory: Thuan Thanh 3 Industrial Park, Thanh Khuong District, Bac Ninh Province, Vietnam
Tel: (+84) 703 708 999
Tax Code: 0103006451

2. Hazard identification

Classification of the substance and mixture

Skin corrosion/irritation: Cat. 2

Serious eye damage/eye irritation: Cat. 2A

Aspiration hazard: Cat. 1

Specific target organ toxicity - single exposure: Cat. 3 (Vapours may cause drowsiness and dizziness)

Specific target organ toxicity — repeated exposure: Cat. 2

Hazardous to the aquatic environment - acute: Cat. 3

Flammable liquids: Cat. 3

Label elements and precautionary statement:

Pictogram:



Signal Word:

Warning

Hazard Statement:

H319	Causes serious eye irritation.
H315	Causes skin irritation.
H402	Harmful to aquatic life.
H226	Flammable liquid and vapour.
H304	May be fatal if swallowed and enters airways.
H373	May cause damage to organs through prolonged or repeated exposure.
H336	May cause drowsiness or dizziness

Precautionary Statements (Prevention):

P271	Use only outdoors or in a well-ventilated area.
P280	Wear protective gloves/protective clothing/eye protection/faceprotection.
P264	Wash with plenty of water and soap thoroughly after handling.
P242	Use only non-sparking tools.
P241	Use explosion-proof electrical/ventilating/lighting/equipment.
P243	Take precautionary measures against static discharge.
P233	Keep container tightly closed.

P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P240	Ground/bond container and receiving equipment.
P260	Do not breathe dust or mist.
P273	Avoid release to the environment.
P261	Avoid breathing dust/fume/gas/mist/vapours/spray.

Precautionary Statements (Response):

P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P312	Call a POISON CENTER or doctor/physician if you feel unwell.
P302+P352	IF ON SKIN: Wash with plenty of soap and water.
P370 + P378	In case of fire: Use water spray for extinction.
P362 + P364	Take off contaminated clothing and wash before reuse.
P321	Specific treatment (see on this label).
P332+P313	If skin irritation occurs: Get medical advice/attention.
P303+P361+P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P337+P313	If eye irritation persists: Get medical advice/attention.
P314	Get medical advice/attention if you feel unwell.

Precautionary Statements (Storage):

P403 + P233	Store in a well-ventilated place. Keep container tightly closed.
P403 + P235	Store in a well-ventilated place. Keep cool.
P405	Store locked up.

Precautionary Statements (Disposal):

P501	Dispose of contents/container to hazardous or special waste collection point.
------	---

3. Composition/information on ingredients

Chemical nature: Mixture

Acrylic resin, cellulose ester, organic solvent

Hazardous ingredients

4-methylpentan-2-one

Content (W/W): $\geq 2.5\%$ - $< 3\%$	Flam. Liq.: Cat. 2
CAS Number: 108-10-1	Acute Tox.: Cat. 4 (Inhalation - vapour)
	Eye Dam./Irrit.: Cat. 2A
	STOT SE: Cat. 3 (irr. to respiratory syst.)

N-Butyl acetate

Content (W/W): $\geq 30\%$ - $< 50\%$	Flam. Liq.: Cat. 3
CAS Number: 123-86-4	STOT SE: Cat. 3 (drowsiness and dizziness)
	Aquatic Acute: Cat. 3

Xylene

Content (W/W): $\geq 12.5\%$ - $< 15\%$	Asp. Tox.: Cat. 1
CAS Number: 1330-20-7	Flam. Liq.: Cat. 3
	Acute Tox.: Cat. 5 (Inhalation - vapour)
	Acute Tox.: Cat. 5 (oral)
	Skin Corr./Irrit.: Cat. 2
	Eye Dam./Irrit.: Cat. 2B
	STOT SE: Cat. 3 (irr. to respiratory syst.)
	STOT RE (Central nervous system, Liver, Kidney): Cat. 2
	Aquatic Acute: Cat. 2
	Aquatic Chronic: Cat. 3

4. First-Aid Measures

General advice:

In all cases of doubt, or when symptoms persist, seek medical attention. Never give anything by mouth to an unconscious person.

If inhaled:

Remove affected person from danger area. Keep warm, calm and covered up. If breathing is irregular or stopped, administer artificial respiration. Seek medical assistance. If the patient is likely to become unconscious, place and transport in stable sideways position (recovery position).

On skin contact:

Remove contaminated clothing. Wash skin with soap and water, rinse abundantly. Do NOT use solvents or thinners.

On contact with eyes:

Contact lenses should be removed. Hold eyelids open and flush with copious amounts of clean, fresh water or a special eyewash solution. Seek medical assistance.

On ingestion:

If accidentally swallowed obtain immediate medical attention. Keep at rest. Do not induce vomiting.

5. Fire-Fighting Measures

Suitable extinguishing media:

Foam (alcohol resistant), carbon dioxide, powders, water spray. Do not allow run-off from fire fighting to enter drains or water courses.

Unsuitable extinguishing media for safety reasons:

water jet

Specific hazards:

Fire will produce dense black smoke. Inhalation of dangerous decomposition products may cause serious damage to health.

Special protective equipment:

Appropriate breathing apparatus may be required.

Further information:

Cool closed containers in the vicinity of the source of fire.

6. Accidental Release Measures

Personal precautions:

Avoid contact with skin and eyes. Keep away from sources of ignition. Avoid inhalation of vapour and spray mist. Ensure adequate ventilation. Avoid breathing vapours.

Environmental precautions:

Do not allow to enter drains or waterways. If the product enters drains or sewers, the local water company should be contacted immediately; in the case of contamination of streams, rivers or lakes, the Environment Agency.

Methods for cleaning up or taking up:

Contain and collect spillage with non-combustible absorbent materials, e.g. sand, earth, vermiculite, diatomaceous earth and place in a suitable container for disposal according with the waste regulations (see section 13). Clean preferably with a detergent; avoid the use of solvents.

7. Handling and Storage

Handling

Avoid contact with skin and eyes. Prevent the creation of flammable or explosive concentrations of vapour in air and avoid vapour concentration higher than the occupational exposure limits. Avoid inhalation of dust from sanding. Smoking, eating and drinking are forbidden in application area. For personal protection see section 8. Comply with the health and safety at work laws. Product may charge electrostatically: always use earthing leads when transferring from one container to another and earth containers. It is recommended that operators should wear antistatic clothing and footwear. Solvent vapours are heavier than air and spread along floors. Vapour forms explosive mixtures with air. Keep container dry and tightly closed in a cool well-ventilated place. Avoid all sources of ignition: heat, sparks, open flame. Avoid inhalation of vapour and spray mist. Do not use any sparking tools.

Storage

Keep away from oxidising agents, from strongly alkaline and strongly acid materials.

Suitable materials for containers: Carbon steel (Iron), tinned carbon steel (Tinplate)

Further information on storage conditions: Electrical equipment must be explosion-proof to the appropriate standard. Floors must be of conducting type and impermeable to the materials being stored. Keep container tightly closed. Never use pressure to empty; container is not a pressure vessel. Close containers carefully once opened and store upright in order to prevent any leakage. No smoking. Prevent unauthorized access. Detailed information can be gained from the relevant technical data sheets. Always keep in containers of same material as the original one. Observe label precautions. Store in a dry, well ventilated place. Protect from direct sunlight. Keep away from sources of ignition. Keep away from heat.

8. Exposure controls and personal protection

Components with occupational exposure limits

4-methylpentan-2-one, 108-10-1;

TWA value 20 ppm (ACGIHTLV)
STEL value 75 ppm (ACGIHTLV)

n-Butyl acetate, 123-86-4;

TWA value 150 ppm (ACGIHTLV)
STEL value 200 ppm (ACGIHTLV)
TWA value 200 mg/m³ (OEL (CN))
STEL value 300 mg/m³ (OEL (CN))

xylene, 1330-20-7;

TWA value 100 ppm (ACGIHTLV)
STEL value 150 ppm (ACGIHTLV)
TWA value 50 mg/m³ (OEL (CN))
STEL value 100 mg/m³ (OEL (CN))

Personal protective equipment

Respiratory protection:

When workers are facing concentrations above the occupational exposure limits they must use appropriate certified respirators. Dry sanding, flame cutting and/or welding of the dry paint film will give rise to dust and/or hazardous fumes. Wet (sanding/ flattening) should be used wherever possible. If exposure cannot be avoided by the provision of local exhaust ventilation, suitable respiratory protective equipment should be used. Use A1P2 breathing-protection half mask in case of contact with aerosols.

Hand protection:

The protection glove should be tested for its specific suitability (e.g. mechanical strength, product compatibility, anti-static properties). Follow manufacturer's advice on use, storage, maintenance and replacement of gloves.

The gloves should be replaced immediately in case of damage or signs of wear. It is recommended to use preventative skin protection (skin cream).

Wear protective gloves. Any chemical protection glove certified according to EN 374 is suitable: e.g.

Eye protection:

Required when there is a risk of eye contact.

Body protection:

Personnel should wear antistatic, flame-retardant clothing made of natural fibres and/or heat-resistant synthetic fibres.

General safety and hygiene measures:

The country-specific occupational exposure limits applicable to the substances specified in section 3 must be taken into account. Ensure

adequate ventilation. This can be achieved by the use of local exhaust ventilation and good general extraction. If these are not sufficient to maintain concentrations at the workplace below the occupational exposure limits, appropriate certified respirators must be worn.

9. Physical and Chemical Properties

Form	: Liquid
Colour	: Green
Odour	: Specific
Flash point	: 24 °C
Flammability (solid/gas)	: not applicable
Lower explosion limit	: 36 g/m ³
Vapour pressure	: 6.70 hPa (20°C)
Density	: 0.980 g/cm ³
Miscibility with water	: immiscible
Viscosity, kinematic	: 6.0 mm ² /s
Flow time	: < 30 s

(DIN EN ISO 2431; 3 mm)

10. Stability and Reactivity

Substances to avoid:

Keep away from highly acidic or alkaline substances as well as oxidants in order to prevent exothermal reactions.

Hazardous reactions:

No hazardous reactions if stored and handled as prescribed/indicated.

The product is stable if stored and handled as prescribed/indicated.

When exposed to high temperatures hazardous decomposition products such as carbon monoxide, carbon dioxide, smoke, oxides of nitrogen may be produced.

11. Toxicological Information

Acute toxicity

Assessment of acute toxicity:

The preparation has been assessed following the conventional method of the Dangerous Preparation Directive 1999/45/EC. See Sections 2 and 15 for details. Exposure to component solvent vapour concentrations in excess of the stated occupational exposure limit may result in adverse health effects such as mucous membrane and respiratory system irritation and adverse effect on kidney, liver and central nervous system. Symptoms and signs include headache, dizziness, fatigue, muscular weakness, drowsiness and in extreme cases, loss of consciousness. Repeated and prolonged exposure to solvents at levels significantly above OELs may lead to the development of long-lasting central nervous system disorders such as chronic toxic encephalopathy, signs of toxicity include changes in behaviour and memory. Solvents may cause some of the above effects by absorption through the skin. Repeated or prolonged contact with the preparation may cause removal of natural fat from the skin resulting in non-allergic contact dermatitis and absorption through the skin. The liquid splashed in the eyes may cause irritation and reversible damage.

12. Ecological Information

Ecotoxicity

Assessment of aquatic toxicity:

No data available.

Persistence and degradability

Assessment biodegradation and elimination (H₂O):

Biological degradability of hazardous substances mentioned in section 3:

Information on: xylene

Elimination information:

87.8 % BOD of the ThOD (28 d) (OECD Guideline 301 F) (aerobic, activated sludge, domestic, non-adapted)

The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

13. Disposal Considerations

Observe national and local legal requirements.

Contaminated packaging:

Contaminated packaging should be emptied as far as possible and disposed of in the same manner as the substance/product.

Dispose of in accordance with national, state and local regulations.

14. Transport Information

Land transport:

Road transport

Hazard Class	:	3
Packing group:	:	III
ID number:	:	UN 1263
Transport hazard class(es):	:	3
Proper shipping name:	:	PAINT RELATED MATERIAL

Rail transport

Hazard Class	:	3
Packing group:	:	III
ID number:	:	UN 1263
Transport hazard class(es):	:	3
Proper shipping name:	:	PAINT RELATED MATERIAL

Inland waterway transport

Hazard Class	:	3
Packing group:	:	III
ID number:	:	UN 1263
Transport hazard class(es):	:	3
Proper shipping name:	:	PAINT RELATED MATERIAL

Sea transport

IMDG		
Hazard Class	:	3
Packing group:	:	III
ID number:	:	UN 1263
Transport hazard class(es):	:	3
Marine pollutant:	:	NO
Proper shipping name:	:	PAINT RELATED MATERIAL

Air transport

IATA/ICAO		
Hazard Class	:	3
Packing group:	:	III
ID number:	:	UN 1263
Hazard label	:	3
Proper shipping name:	:	PAINT RELATED MATERIAL

15. Regulatory Information

Regulations of the European union (Labelling)

Hazard symbol(s)

Xn Harmful.

R-phrases(s)

R10 Flammable.
R20/21 Harmful by inhalation and in contact with skin.
R48/20 Harmful: Danger of serious damage to health by prolonged exposure through inhalation.
R65 Harmful: may cause lung damage if swallowed.
R66 Repeated exposure may cause skin dryness or cracking.

S-phrases(s)

S51 Use only in well-ventilated areas.
S62 If swallowed, do not induce vomiting: seek medical advice immediately and show this container or label.
S36/37 Wear suitable protective clothing and gloves.

Hazard determining component(s) for labelling: N-BUTYLACETATE, XYLENE

Other regulations

Registration status:

IECSC, CN released / listed

This MSDS is prepared pursuant to the standard on General Rules for Classification and Hazard Communication of Chemicals.

It needs to comply with Regulations on the Safety Administration of Hazardous Chemicals (if the product is classified in accordance with GHS).

16. Other Information

Unsuitable for use: spray application

For multi-pack systems observe material safety data sheets of all components. Restricted to professional users.

Vertical lines in the left hand margin indicate an amendment from the previous version.

The data contained in this safety data sheet are based on our current knowledge and experience and describe the product only with regard to safety requirements. The data do not describe the product's properties (product specification). Neither should any agreed property nor the suitability of the product for any specific purpose be deduced from the data contained in the safety data sheet. It is the responsibility of the recipient of the product to ensure any proprietary rights and existing laws and legislation are observed.