



FLASH

Version 2.0

MSDS Number: H54806

Revision Date: 30.05.2017

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

1.1 Product identifier

Trade name : FLASH

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

Use of the Sub-
stance/Mixture : Paint additive

Recommended restrictions
on use : For use in industrial installations or professional treatment
only.

1.3 Details of the supplier of the safety data sheet

Company : Roberlo s.a.
Ctra. Nacional II, Km. 706,5
17457 Riudellots de la Selva
Spain

Telephone : +34972478060

Telefax : +34972477394

E-mail address of person
responsible for the SDS : msds@roberlo.com

1.4 Emergency telephone number

+34 972 478060 (8:00-12:45 / 14:15-17:30 h) ROBERLO (Spain) (GMT + 1:00)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

Flam. Liq. 2 H225: Highly flammable liquid and vapour.

Acute Tox. 4 H332: Harmful if inhaled.

Skin Irrit. 2 H315: Causes skin irritation.

Eye Irrit. 2 H319: Causes serious eye irritation.

STOT SE 3 H335: May cause respiratory irritation.

STOT RE 2 H373: May cause damage to organs through pro-
longed or repeated exposure if inhaled.

FLASH

Version 2.0

MSDS Number: H54806

Revision Date: 30.05.2017

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

Hazard pictograms :



Signal word : Danger

Hazard statements : H225 Highly flammable liquid and vapour.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H332 Harmful if inhaled.
H335 May cause respiratory irritation.
H373 May cause damage to organs through prolonged or repeated exposure if inhaled.

Precautionary statements : **Prevention:**
P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P260 Do not breathe vapours.
P260 Do not breathe spray.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
Response:
P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P362 + P364 Take off contaminated clothing and wash it before reuse.
P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.
Disposal:
P501 Dispose of contents/ container to an approved waste disposal plant.

Hazardous components which must be listed on the label:

isobutyl methyl ketone

xylene (mixture of isomers)

2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

FLASH

Version 2.0

MSDS Number: H54806

Revision Date: 30.05.2017

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Hazardous components

Chemical Name	CAS-No. EC-No. Registration number	Classification (REGULATION (EC) No 1272/2008)	Concentration (%)
isobutyl methyl ketone	108-10-1 203-550-1 01- 2119473980-30	Flam. Liq. 2; H225 Acute Tox. 4; H332 Eye Irrit. 2; H319 STOT SE 3; H335	$\geq 30 - < 50$
2-methoxy-1-methylethyl acetate	108-65-6 203-603-9 01- 2119475791-29	Flam. Liq. 3; H226	$\geq 20 - \leq 30$
xylene (mixture of isomers)	1330-20-7 215-535-7 01- 2119488216-32	Flam. Liq. 3; H226 Acute Tox. 4; H332 Acute Tox. 4; H312 Skin Irrit. 2; H315 Eye Irrit. 2; H319 STOT SE 3; H335 STOT RE 2; H373 Asp. Tox. 1; H304	$\geq 12.5 - < 20$
n-butyl acetate	123-86-4 204-658-1 01- 2119485493-29	Flam. Liq. 3; H226 STOT SE 3; H336, EUH066	$\geq 15 - < 20$
ethylbenzene	100-41-4 202-849-4 01- 2119489370-35	Flam. Liq. 2; H225 Acute Tox. 4; H332 STOT RE 2; H373 Asp. Tox. 1; H304	$\geq 1 - < 10$
dioctyltin dilaurate	3648-18-8 222-883-3 01- 2119979527-19	STOT SE 2; H371	$\geq 1 - < 10$

For explanation of abbreviations see section 16.



FLASH

Version 2.0

MSDS Number: H54806

Revision Date: 30.05.2017

SECTION 4: First aid measures

4.1 Description of first aid measures

- | | |
|-------------------------|--|
| General advice | : No hazards which require special first aid measures. |
| If inhaled | : Move to fresh air in case of accidental inhalation of dust or fumes from overheating or combustion.
If symptoms persist, call a physician. |
| In case of skin contact | : Take off contaminated clothing and shoes immediately.
Wash off with soap and plenty of water. |
| In case of eye contact | : Flush eyes with water as a precaution.
Remove contact lenses.
Protect unharmed eye.
Keep eye wide open while rinsing. |
| If swallowed | : Clean mouth with water and drink afterwards plenty of water.
Do not give milk or alcoholic beverages.
Never give anything by mouth to an unconscious person. |

4.2 Most important symptoms and effects, both acute and delayed

None known.

4.3 Indication of any immediate medical attention and special treatment needed

- | | |
|-----------|-----------------------------|
| Treatment | : No information available. |
|-----------|-----------------------------|

SECTION 5: Firefighting measures

5.1 Extinguishing media

- | | |
|------------------------------|---|
| Suitable extinguishing media | : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. |
|------------------------------|---|

5.2 Special hazards arising from the substance or mixture

- | | |
|-------------------------------|--|
| Hazardous combustion products | : No hazardous combustion products are known |
|-------------------------------|--|

5.3 Advice for firefighters

- | | |
|---|--|
| Special protective equipment for firefighters | : In the event of fire, wear self-contained breathing apparatus. |
| Further information | : Standard procedure for chemical fires. |

FLASH

Version 2.0

MSDS Number: H54806

Revision Date: 30.05.2017

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions : Use personal protective equipment.
Ensure adequate ventilation.
Remove all sources of ignition.
Evacuate personnel to safe areas.
Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.

6.2 Environmental precautions

Environmental precautions : No special environmental precautions required.

6.3 Methods and material for containment and cleaning up

Methods for cleaning up : Wipe up with absorbent material (e.g. cloth, fleece).
Keep in suitable, closed containers for disposal.

6.4 Reference to other sections

For contact information in case of emergency, see section 1. For information on safe handling, see section 7. For exposure controls and personal protection measures, see section 8. For subsequent waste disposal, follow the recommendations in section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Advice on safe handling : For personal protection see section 8.
No special handling advice required.

Advice on protection against fire and explosion : Normal measures for preventive fire protection.

Hygiene measures : General industrial hygiene practice.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers : Keep container tightly closed in a dry and well-ventilated place.

Advice on common storage : No special restrictions on storage with other products.

Storage period : 12 Months

Other data : No decomposition if stored and applied as directed.

7.3 Specific end use(s)

Specific use(s) : For the use of this product do not exist particular recommendations apart from that already indicated.

FLASH

Version 2.0

MSDS Number: H54806

Revision Date: 30.05.2017

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational Exposure Limits

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
isobutyl methyl ketone	108-10-1	TWA	20 ppm 83 mg/m3	2000/39/EC
Further information	Indicative			
isobutyl methyl ketone	108-10-1	STEL	50 ppm 208 mg/m3	2000/39/EC
Further information	Indicative			
isobutyl methyl ketone	108-10-1	TWA	50 ppm 208 mg/m3	GB EH40
Further information	Can be absorbed through skin. The assigned substances are those for which there are concerns that dermal absorption will lead to systemic toxicity.			
isobutyl methyl ketone	108-10-1	STEL	100 ppm 416 mg/m3	GB EH40
Further information	Can be absorbed through skin. The assigned substances are those for which there are concerns that dermal absorption will lead to systemic toxicity.			
2-methoxy-1-methylethyl acetate	108-65-6	TWA	50 ppm 275 mg/m3	2000/39/EC
Further information	Identifies the possibility of significant uptake through the skin, Indicative			
2-methoxy-1-methylethyl acetate	108-65-6	STEL	100 ppm 550 mg/m3	2000/39/EC
Further information	Identifies the possibility of significant uptake through the skin, Indicative			
2-methoxy-1-methylethyl acetate	108-65-6	TWA	50 ppm 274 mg/m3	GB EH40
Further information	Can be absorbed through skin. The assigned substances are those for which there are concerns that dermal absorption will lead to systemic toxicity.			
2-methoxy-1-methylethyl acetate	108-65-6	STEL	100 ppm 548 mg/m3	GB EH40
Further information	Can be absorbed through skin. The assigned substances are those for which there are concerns that dermal absorption will lead to systemic toxicity.			
xylene (mixture of isomers)	1330-20-7	TWA	50 ppm 220 mg/m3	GB EH40
Further information	Can be absorbed through skin. The assigned substances are those for which there are concerns that dermal absorption will lead to systemic toxicity.			
xylene (mixture of isomers)	1330-20-7	STEL	100 ppm 441 mg/m3	GB EH40
Further information	Can be absorbed through skin. The assigned substances are those for which there are concerns that dermal absorption will lead to systemic toxicity.			
xylene (mixture of isomers)	1330-20-7	TWA	50 ppm 221 mg/m3	2000/39/EC

FLASH

Version 2.0

MSDS Number: H54806

Revision Date: 30.05.2017

Further information	Identifies the possibility of significant uptake through the skin, Indicative			
xylene (mixture of isomers)	1330-20-7	STEL	100 ppm 442 mg/m ³	2000/39/EC
Further information	Identifies the possibility of significant uptake through the skin, Indicative			
n-butyl acetate	123-86-4	TWA	150 ppm 724 mg/m ³	GB EH40
n-butyl acetate	123-86-4	STEL	200 ppm 966 mg/m ³	GB EH40
ethylbenzene	100-41-4	TWA	100 ppm 442 mg/m ³	2000/39/EC
Further information	Identifies the possibility of significant uptake through the skin, Indicative			
ethylbenzene	100-41-4	STEL	200 ppm 884 mg/m ³	2000/39/EC
Further information	Identifies the possibility of significant uptake through the skin, Indicative			
ethylbenzene	100-41-4	TWA	100 ppm 441 mg/m ³	GB EH40
Further information	Can be absorbed through skin. The assigned substances are those for which there are concerns that dermal absorption will lead to systemic toxicity.			
ethylbenzene	100-41-4	STEL	125 ppm 552 mg/m ³	GB EH40
Further information	Can be absorbed through skin. The assigned substances are those for which there are concerns that dermal absorption will lead to systemic toxicity.			
dioctyltin dilaurate	3648-18-8	TWA	0.1 mg/m ³ (Tin)	GB EH40
Further information	Can be absorbed through skin. The assigned substances are those for which there are concerns that dermal absorption will lead to systemic toxicity.			
dioctyltin dilaurate	3648-18-8	STEL	0.2 mg/m ³ (Tin)	GB EH40
Further information	Can be absorbed through skin. The assigned substances are those for which there are concerns that dermal absorption will lead to systemic toxicity.			

Derived No Effect Level (DNEL) according to Regulation (EC) No. 1907/2006:

2-methoxy-1-methylethyl acetate	: End Use: Workers Exposure routes: Inhalation Potential health effects: Long-term systemic effects Value: 275 mg/m ³
xylene	: End Use: Workers Exposure routes: Inhalation Potential health effects: Long-term systemic effects Value: 77 mg/m ³
n-butyl acetate	: End Use: Workers Exposure routes: Inhalation Potential health effects: Long-term systemic effects Value: 480 mg/m ³
ethylbenzene	: End Use: Workers Exposure routes: Inhalation Potential health effects: Long-term systemic effects Value: 77 mg/m ³
dioctyltin dilaurate	: Exposure routes: Inhalation Potential health effects: Long-term systemic effects Value: 0.0035 mg/m ³



FLASH

Version 2.0

MSDS Number: H54806

Revision Date: 30.05.2017

8.2 Exposure controls

Personal protective equipment

Eye protection : Safety glasses

Hand protection

Remarks : For prolonged or repeated contact use protective gloves.

Skin and body protection : Protective suit

Respiratory protection : No personal respiratory protective equipment normally required.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance : liquid

Colour : colourless

Odour : characteristic

pH : Not applicable

Melting point/range : not determined

Boiling point/boiling range : not determined

Flash point : 16 °C
Method: ISO 1523, closed cup
Setaflash

Upper explosion limit : not determined

Lower explosion limit : not determined

Vapour pressure : not determined

Density : 0.87 g/cm³ (20 °C)
Method: ISO 2811-1

Solubility(ies)
Water solubility : immiscible

Viscosity
Viscosity, dynamic : 78 mPa.s Method: ISO 2555

Viscosity, kinematic : > 20.5 mm²/s (40 °C)



FLASH

Version 2.0

MSDS Number: H54806

Revision Date: 30.05.2017

9.2 Other information

No data available

SECTION 10: Stability and reactivity

10.1 Reactivity

Stable under recommended storage conditions.

10.2 Chemical stability

No decomposition if stored and applied as directed.

10.3 Possibility of hazardous reactions

Hazardous reactions : No hazards to be specially mentioned.

10.4 Conditions to avoid

Conditions to avoid : Heat, flames and sparks.

10.5 Incompatible materials

Materials to avoid : Oxidizing agents
Strong acids and strong bases

10.6 Hazardous decomposition products

Hazardous decomposition products : Carbon monoxide

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Product:

Acute inhalation toxicity : Acute toxicity estimate : 18.41 mg/l
Exposure time: 4 h
Test atmosphere: vapour
Method: Calculation method

Acute dermal toxicity : Acute toxicity estimate : > 2,000 mg/kg
Method: Calculation method

Components:

isobutyl methyl ketone:

Acute oral toxicity : LD50 Oral (Rat): 2,080 mg/kg
Method: OECD Test Guideline 401

FLASH

Version 2.0

MSDS Number: H54806

Revision Date: 30.05.2017

Acute inhalation toxicity : LC50 (Rat): 8.2 mg/l
Exposure time: 4 h
Method: OECD Test Guideline 403

Acute dermal toxicity : LD50 (Rabbit): 20,000 mg/kg
Method: OECD Test Guideline 402

2-methoxy-1-methylethyl acetate:

Acute oral toxicity : LD50 Oral (Rat): 8,532 mg/kg
Method: OECD Test Guideline 401

Acute inhalation toxicity : LC50 (Rat): 35.7 mg/l
Exposure time: 4 h
Method: OECD Test Guideline 403

Acute dermal toxicity : LD50 (Rat): 5,000 mg/kg
Method: OECD Test Guideline 402

xylene (mixture of isomers):

Acute oral toxicity : LD50 Oral (Rat): 4,300 mg/kg
Method: OECD Test Guideline 401

Acute inhalation toxicity : LC50 (Rat): 22.08 mg/l
Exposure time: 4 h
Method: OECD Test Guideline 403

Acute dermal toxicity : Acute toxicity estimate : 1,100 mg/kg
Method: Converted acute toxicity point estimate

n-butyl acetate:

Acute oral toxicity : LD50 Oral (Rat): 10,768 mg/kg
Method: OECD Test Guideline 401

Acute inhalation toxicity : LC50 (Rat): 23.4 mg/l
Exposure time: 4 h
Method: OECD Test Guideline 403

Acute dermal toxicity : LD50 (Rabbit): 17,600 mg/kg
Method: OECD Test Guideline 402

ethylbenzene:

Acute oral toxicity : LD50 Oral (Rat): 3,500 mg/kg
Method: OECD Test Guideline 401

Acute inhalation toxicity : LC50 (Rat): 17.4 mg/l
Exposure time: 4 h
Method: OECD Test Guideline 403

Acute dermal toxicity : LD50 (Rabbit): 15,400 mg/kg
Method: OECD Test Guideline 402

dioctyltin dilaurate:



FLASH

Version 2.0

MSDS Number: H54806

Revision Date: 30.05.2017

Acute oral toxicity : LD50 Oral (Rat): 6,450 mg/kg
Method: OECD Test Guideline 401

Acute inhalation toxicity : Remarks: No data available

Acute dermal toxicity : LD50 (Rat): > 2,000 mg/kg
Method: OECD Test Guideline 402

Skin corrosion/irritation

Product:

Result: Skin irritation

Serious eye damage/eye irritation

Product:

Remarks: Severe eye irritation

Respiratory or skin sensitisation

Product:

Remarks: Based on available data, the classification criteria are not met.

Germ cell mutagenicity

Product:

Germ cell mutagenicity- Assessment : Based on available data, the classification criteria are not met.

Carcinogenicity

Product:

Carcinogenicity - Assessment : Based on available data, the classification criteria are not met.

Reproductive toxicity

Product:

Reproductive toxicity - Assessment : Based on available data, the classification criteria are not met.

STOT - single exposure

Product:

Assessment: The substance or mixture is classified as specific target organ toxicant, single exposure, category 3 with respiratory tract irritation.

FLASH

Version 2.0

MSDS Number: H54806

Revision Date: 30.05.2017

STOT - repeated exposure

Product:

Assessment: The substance or mixture is classified as specific target organ toxicant, repeated exposure, category 2.

Aspiration toxicity

Product:

Based on available data, the classification criteria are not met.

Further information

Product:

Remarks: No data available

SECTION 12: Ecological information

12.1 Toxicity

Components:

isobutyl methyl ketone:

Toxicity to fish : LC50 (Fish): 179 mg/l
Exposure time: 96 h
Method: OECD Test Guideline 203

Toxicity to daphnia and other : EC50 (Daphnia (water flea)): 200 mg/l
aquatic invertebrates Exposure time: 48 h
Method: OECD Test Guideline 202

Toxicity to algae : EC50 (Algae): 400 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201

2-methoxy-1-methylethyl acetate:

Toxicity to fish : LC50 (Fish): 100 mg/l
Exposure time: 96 h
Method: OECD Test Guideline 203

Toxicity to daphnia and other : EC50 (Daphnia (water flea)): 408 mg/l
aquatic invertebrates Exposure time: 48 h
Method: OECD Test Guideline 202

Toxicity to algae : EC50 (Algae): 1,000 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201

xylene (mixture of isomers):

Toxicity to fish : LC50 (Fish): 14 mg/l

FLASH

Version 2.0

MSDS Number: H54806

Revision Date: 30.05.2017

Exposure time: 96 h
Method: OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia (water flea)): 16 mg/l
Exposure time: 48 h
Method: OECD Test Guideline 202

Toxicity to algae : EC50 (Algae): > 10 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201

n-butyl acetate:

Toxicity to fish : LC50 (Fish): 18 mg/l
Exposure time: 96 h
Method: OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia (water flea)): 32 mg/l
Exposure time: 48 h
Method: OECD Test Guideline 202

Toxicity to algae : EC50 (Algae): 675 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201

ethylbenzene:

Toxicity to fish : LC50 (Fish): 12 mg/l
Exposure time: 96 h
Method: OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia (water flea)): 1.8 mg/l
Exposure time: 48 h
Method: OECD Test Guideline 202

Toxicity to algae : EC50 (Algae): 33 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201

dioctyltin dilaurate:

Toxicity to fish : Remarks: No data available

Toxicity to daphnia and other aquatic invertebrates : Remarks: No data available

Toxicity to algae : Remarks: No data available

12.2 Persistence and degradability

No data available

12.3 Bioaccumulative potential

No data available



FLASH

Version 2.0

MSDS Number: H54806

Revision Date: 30.05.2017

12.4 Mobility in soil

No data available

12.5 Results of PBT and vPvB assessment

Product:

Assessment : This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

12.6 Other adverse effects

Product:

Additional ecological information : There is no data available for this product.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product : Offer surplus and non-recyclable solutions to a licensed disposal company.

Contaminated packaging : Empty remaining contents.
Empty containers should be taken to an approved waste handling site for recycling or disposal.

SECTION 14: Transport information

14.1 UN number

ADR : UN 1263

IMDG : UN 1263

IATA : UN 1263

14.2 UN proper shipping name

ADR : PAINT RELATED MATERIAL

IMDG : PAINT RELATED MATERIAL

IATA : Paint related material

14.3 Transport hazard class(es)

ADR : 3

IMDG : 3

IATA : 3



FLASH

Version 2.0

MSDS Number: H54806

Revision Date: 30.05.2017

14.4 Packing group

ADR

Packing group : II
Classification Code : F1
Hazard Identification Number : 33
Labels : 3

IMDG

Packing group : II
Labels : 3
EmS Code : F-E, S-E

IATA

Packing instruction (cargo aircraft) : 364
Packing instruction (LQ) : Y341
Packing group : II
Labels : Flammable Liquids

14.5 Environmental hazards

ADR

Environmentally hazardous : no

IMDG

Marine pollutant : no

14.6 Special precautions for user

Not applicable

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances.

		Quantity 1	Quantity 2
P5c	FLAMMABLE LIQUIDS	5,000 t	50,000 t

Other regulations : The product is classified and labelled in accordance with EC directives or respective national laws.

15.2 Chemical Safety Assessment

Not applicable

SECTION 16: Other information

Full text of H-Statements

EUH066	Repeated exposure may cause skin dryness or cracking.
H225	Highly flammable liquid and vapour.



FLASH

Version 2.0

MSDS Number: H54806

Revision Date: 30.05.2017

H226	Flammable liquid and vapour.
H304	May be fatal if swallowed and enters airways.
H312	Harmful in contact with skin.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.
H371	May cause damage to organs if swallowed.
H373	May cause damage to organs through prolonged or repeated exposure if inhaled.

Further information

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.