


AGRIA S.A.  4009 Plovdiv BULGARIA	SAFETY DATA SHEET According to Annex II of Regulation (EC) № 1907/2006 and Regulation (EC) № 1272/2008 [CLP]	Issue date: 01.04.2004 Edition № 8
	NASA 360 SL	Date of edition: 28.01.2019

1. IDENTIFICATION OF THE SUBSTANCE/ MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product identifiers

Name of the substance : Glyphosate 360 g/l SL
 EC № : -
 Registration № (REACH) : -
 CAS № : -

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

Identified uses : Herbicide

1.3. Details of the supplier of the safety data sheet

Manufacture/ Supplier : AGRIA S.A.
 Street/ Zip Code : Asenovgradsko shose, 4009 Plovdiv
 Phone : 032 273 500, the phone number is available only during office hours
 Fax : + 359 32 63 83 77
 E-mail : agria@agria.bg

1.4 Emergency telephone number

Available : +44 (0)800 246 1274 (dangerous goods safety advisor)
 Language telephone line : 24/7
 : English

2. HAZARD IDENTIFICATION

2.1. Classification of the substance or mixture

Classification According Regulation (EC) No 1272/2008 (CLP) : Hazardous to the aquatic environment - Acute 1

2.2. Label elements

Labeling according to Regulation (EC) No 1272/2008 (CLP)
 Hazard pictograms :



Signal words : **WARNING**

Hazard Statements

: **H400** – Very toxic to aquatic life
H411 – Toxic to aquatic life with long lasting effects

Precautionary Statements

: **Prevention**
P201 – Obtain special instructions before use
P202 – Do not handle until all safety precautions have been read and understood
P264 – Wash hands thoroughly after handling
P270 – Do not eat, drink or smoke when using this product
P273 – Avoid release to the environment.
P281 – Use personal protective equipment as required
P302+352 – IF ON SKIN: Wash with soap and water
P305+351+338 – IF IN EYES: Rinse continuously with water for several minutes. Remove contact lenses if present and easy to do – continue rinsing

Response
P391 – Collect spillage.

Disposal
P501 – Dispose of contents/containers in accordance with local/ regional/ national/ international regulations (to be specified).

EUH401 - To avoid risks to human health and the environment, comply with the instructions for use.

2.3. Other hazards

: Toxic to flora

3. COMPOSITION/ INFORMATION ON INGREDIENTS**3.1. Substances**

: Refers to a mixture

3.2. Mixtures

Description of the mixture

Name	CAS №	EC №	Index №	REACH Reg.№	Concentration (% w/w)	Classification according Regulation (EC) No 1272/2008 (CLP)
<i>Glyphosate acid</i>	1071-83-6	213-997-4	-	-	31.0 %	Eye Dam.1; H318 Aquatic Chronic 2; H411
Equivalent to <i>Glyphosate isopropylamine salt</i>	38641-94-0	254-056-8	-	-	42.0 %	Aquatic Chronic 2; H411
<i>Betaines, C12-14 (even numbered)-alkyldimethyl</i>	66455-29-6	266-368-1; 931-700-2	-	01-211952 9251-48-0003	≤ 10.0 %	Skin irrit. 2 H315 Eye Dam. 1; H318 Aquatic Chronic 3; H412

For full text of Hazard categories and Hazard statements: see SECTION 16 (v).

4. FIRST AID MEASURES**4.1. Description of first aid measures**

Following inhalation

: Remove to fresh air until recovered. If patient has difficulties in breathing seek medical attention.

- Following skin contact : Remove contaminated clothing and wash affected areas with soap and water. Seek medical attention if the problem persists. Launder contaminated clothing before re-use.
- Following eye contact : Flush with fresh water for at least 15 minutes. Seek medical attention if the problem persists.
- Following ingestion : Seek medical advice immediately. Do not induce vomiting.
- Self-protection of the first-aiders : If necessary use PPE, see SECTION 8

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

- : Primarily irritation

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

- : Treat symptomatically.

5. FIREFIGHTING MEASURES

5.1. Extinguishing media

- Suitable extinguishing media : Dry powder, carbon dioxide fire extinguishers. In case of large fires use water spray, foam extinguisher.
- Unsuitable extinguishing media : No available information

5.2. Special hazards arising from the substance or mixture

- Hazardous combustion products : Not flammable. Use water spray to cool containers.
- : In fire toxic and corrosive films may be realized including nitro oxides, carbon oxides and phosphorus oxides.

5.3. Advice for firefighters

- : Firefighting personnel or other exposed to products of combustion should wear full protective clothing and self-containing breathing apparatus. Thoroughly decontaminate equipment after use.

6. ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

For those staff which does not meet for emergency

For the persons responsible for emergency

- : Remove immediately.
- : Eliminate all ignition sources (flame or spark). Provide local and general exhaust ventilation. Use protective clothing and gloves, respiratory mask with an effective particulate filter, chemical goggles for eye protection.

6.2. Environmental precautions

- : In case of accidental release take precautions to protect the surface and underground water, soil and sewage from contamination. Remove the sources of heat and flames. In case of spill into the sewage, surface water, ground water or soil notify the competent authorities immediately.

6.3. Methods and material for containment and cleaning up

For containment and cleaning

- : Contain spills and absorb with sand or commercial absorbent product. Wash contaminated area with water. Place contaminated material including washing water and drying materials in clearly marked drums for disposal by a registered waste disposal contractor. Inform the relevant local/national authorities if the spillage occurs in a public place.

Other information

- : Not available.

6.4. Reference to other sections

: The collected product and/ or contaminated materials should be treated as a waste according to section 13.

7. HANDLING AND STORAGE

7.1. Precautions for safe handling

Precautionary measures

: No specific handling precautions apply to unopened containers. Follow relevant manual handling guidance and good industrial practice procedures. When handling opened containers eye protection and impervious gloves are required.

Measures to prevent fire

: Product itself does not burn. No special fire protection measures are necessary.

Measures to prevent aerosol and dust

: If technically possible use local exhaust ventilation.

Measures for environmental protection

: No special provisions if the product is used appropriately.

Advice on general occupational hygiene

: Do not eat, drink or smoke when handling the product. In case of contamination change the work clothing. Avoid inhalation, ingestion and contact with eyes and skin. Do not handle this product without wearing the recommended personal protective clothing and equipment.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures and storage conditions

: Do not allow the product to remain in contact with ferrous or galvanised materials for extended periods of time as hydrogen gas will be formed that could present a fire/explosion hazard. Store in designated chemical stores away from children, human and animal foods.

Packing materials

: Store in original container.

Requirements for storage rooms and vessels

: Store in well ventilated storage rooms, not more than 35 °C.

Class of storage

: Not available

Additional information on storage conditions

: Not available

7.3. Specific end use(s)

Recommendations

: See point 1.2 and the label/ leaflet for relevant uses of this product.

8. EXPOSURE CONTROL/ PERSONAL PROTECTION

8.1. Control parameters

Occupational exposure limit values in air according to national (Bulgarian) legislation

None established

Occupational exposure limit values in air according to EU legislation

None established

Consult the relevant national limit values currently applicable in the EU Member State/ Non EU country in which this safety data sheet is being provided

8.2. Exposure controls

8.2.1. **Appropriate engineering controls**

Structural, organizational and technical measures : Engineering controls and appropriate work processes must be used to eliminate or reduce worker and environmental exposure in the areas where the substance is handled, transported, loaded, unloaded, stored and used. These measures must be adequate for the extent of the actual risk. Provide adequate local exhaust ventilation. Use specialized transfer system if available.

8.2.2. Individual protection measures, such as personal protective equipment

Respiratory protection : Recommended when handling concentrate. Use half mask with a particle filter FFP2 against solid particles and liquid aerosols



Skin protection : For prolonged or repeated exposure: Wear clothing covering the skin, sustainable penetration of the material.



Eye protection : Use safety glasses with side shields (according to EN 166).



Hand protection : **In case of short term exposure:** Single-use vinyl gloves.
In case of prolonged or frequently repeated exposure Use of nitrile-rubber gloves for multiple use with accordance with EN 374. Thickness > 0.4mm. If wearing up change the gloves.



Thermal hazards : Not applicable.

8.2.3. Environmental exposure controls

: Emissions from ventilation system and work process equipment should be checked for compliance with the legislation on environmental safety.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

(a) Appearance : Light yellow to amber liquid
Reference: Own GLP study – “Physical State, Appearance and Color”

(b) Odor : Practically odorless to slight amine – like odor
Reference: Own GLP study – “Physical State, Appearance and Color”

(c) Odor threshold : Not determinate
Reference: Own GLP study – “Physical State, Appearance and Color”

(d) pH : 4.5 ± 0.5 (1% solution)
Reference: Own GLP study – “pH determination”

(e) Melting point/ Freezing point : Not applicable – the mixture is a liquid at ambient temperature and must be protected from frost

(f) Initial boiling point and boiling range : 100 °C
Reference: Own GLP study – “Determination of boiling point”

(g) Flash point : Not applicable (the mixture is water based)

- (h) *Evaporation rate* : Not available
- (i) *Flammability (solid, gas)* : Not applicable (liquid)
- (j) *Upper lower flammability or explosive limits* : Not applicable (the mixture is water based)
- (k) *Vapor pressure* : Not volatility (the mixture is water based)
- (l) *Vapor density* : Not applicable

(m) *Density* : 1.1600 ÷ 1.1750 g/cm³ at 20 °C

Reference: Own GLP study – “Determination of relative density”

- (n) *Solubility(ies)* : Completely soluble in water
- (o) *Partition coefficient: n-octanol/water* : Not applicable (water based mixture)
- (p) *Auto – ignition temperature* : Not applicable
- (q) *Decomposition temperature* : >100 °C
- (r) *Viscosity* : 81.9 @ 100 rpm at 20 °C

Reference: Own GLP study – “Determination of Viscosity”

(s) *Explosive properties* : Not explosive

Reference: Own GLP study – “Explosive properties”

(t) *Oxidizing properties* : Not an oxidizing agent

Reference: Own GLP study – “Oxidizing properties”

9.2. Other information

Corrosion : Corrosive to mild steel, galvanized steel and zinc

10. STABILITY AND REACTIVITY

- 10.1. Reactivity** : No hazardous reactions when stored and handled according to instructions.
- 10.2. Chemical stability** : Stable under normal conditions.
- 10.3. Possibility of hazardous reactions** : Not hazardous reaction when stored in original container under normal conditions of storage and use. Reacts with strong bases and strong oxidizing substances, galvanized steel and unlined mild steel with the release of hydrogen, a highly flammable gas that may explode.
- 10.4. Conditions to avoid** : Contact with galvanized steel, mild steel and zinc strong bases and strong oxidizing substances. Do not store in proximity of sources of ignition and direct sunlight.
- 10.5. Incompatible materials** : Galvanized steel, mild steel and zinc. Avoid contact with strong bases and strong oxidizing substances.
- 10.6. Hazardous decomposition products** : During decomposition evolves toxic fumes including nitrogen oxides, carbon oxides and phosphorus oxides.

11. TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

Data on formulated product

Acute toxicity effects based on own studies:

LD₅₀ > 2000 mg/kg (oral in rat)

Method: EC B.1 and OECD 423

Reference: Own GLP study “Acute oral toxicity of Glyphosate IPA salt in rats”

LD₅₀ > 2000 mg/kg (dermal rat)

Method: EC B.3 and OECD 402

Reference: Own GLP study “Acute dermal toxicity of Glyphosate IPA salt in rats”

LC₅₀, inhalation, rat: > 4.96 mg/l 4h (for the active substance)

Method: OECD 403

Reference: Own GLP study “Acute inhalation toxicity of Glyphosate IPA in rats”

Skin irritation effect based on own studies: Not irritating (rabbit)

Method: EC B.4 and OECD 404

Reference: Own GLP study "Acute dermal irritation study of Glyphosate IPA salt in rabbit"

Eye irritation effect based on own studies: Not irritating (rabbit)

Method: EC B.5 and OECD 405

Reference: Own GLP study "Acute eye irritation study of Glyphosate IPA salt in rabbit"

Respiratory or skin sensitization effect based on own studies: The product is not classified as a respiratory or skin sensitizer (guinea pig)

Method: EC B.6 and OECD 406

Reference: Own GLP study "Skin sensitization study of Glyphosate IPA salt in guinea pig"

Germ cell mutagenicity	: Glyphosate does not exhibit a mutagenic risk
Carcinogenicity	: Not classified as carcinogenic
Reproductive toxicity	: Not classified as toxic to reproduction
STOT – single exposure	: No evidence for specific organ effects from single exposure
STOT – repeated exposure	: No evidence for specific organ effects from repeated exposure
Aspiration hazards	: Not applicable

12. ECOLOGICAL INFORMATION

12.1. Toxicity effects based on own studies:

Data on formulated product

Waterflea (*Daphnia magna*): EC₅₀ = 28.62 mg/l (48 h)

Method: EC C.2 and OECD 202

Reference: Own GLP study "Acute immobilisation study of Glyphosate IPA salt in *Daphnia magna*"

Algae E_bC_r EC₅₀ – 34.3 µg/l (72h)

Method: EC C.3 and OECD 201

Reference: Own GLP study "Alga growth inhibition test with Glyphosate IPA salt"

Birds: LD₅₀ > 2000 mg/kg (*Mallard duck*)

Method: EPA OPPTS 850.2100 (PUBLIC DRAFT)

Reference: Own GLP study "Acute oral toxicity study of Glyphosate IPA salt in Mallard duck"

Fish: LC₅₀: 6.09 mg/l (96 h) (*Rainbow trout*)

Method: EC C.1 and OECD 203

Reference: Own GLP study "Acute oral toxicity study of Glyphosate IPA salt in Rainbow trout"

Honeybees: LD₅₀ (*oral and contact*) > 100 µg/bee.

Method: EC C.8 and OECD 214

Reference: Own GLP study "Acute toxicity study of Glyphosate IPA salt in honey bees"

Earthworms: LD₅₀ > 5000 mg/kg.

Method: EC C.8 and OECD 207

Reference: Own GLP study "Acute toxicity study of Glyphosate IPA salt in earthworms"

12.2. Persistence and degradability

: Not readily biodegradable

12.3. Bioaccumulative potential

: Glyphosate is not expected to bioaccumulate.

12.4. Mobility in soil

: Glyphosate binds strongly to soil.

12.5. Results of PBT and vPvB assessment

: Does not contain any PBT or vPvB substances

12.6. Other adverse effects

: Not known

12.7. Additional information

: Not available

13. DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

: **Disposal must be carried out** in accordance with the provisions of the national legislation, in an environmentally safe manner.

Recommended treatment method: burning in appropriately licensed incinerators.

Collection of small product quantities:

Store in solid waste containers.

The container should be clearly labelled, with content description, danger indication symbols, H- and P-statements. Store in well ventilated areas, until deposit to a licensed waste disposal company. The water used for contaminated surface washing should be collected for further treatment.

Do not reuse the empty containers for any other purpose.

Do not dispose into the sewage. Do not pollute natural water sources.

Waste code:

: 07 04 01* aqueous washing liquid and mother liquors

Waste code, packaging:

: 15 01 10* packaging containing residues of or contaminated by dangerous substances

14. TRANSPORT INFORMATION

14.1. General information

UN-No. (ADR)

: 3082

UN proper shipping name

: Environmentally hazardous substance, liquid, n.o.s (glyphosate isopropylamine salt)

Transport hazard class(es)

: 9

Packing group

: III

Environmental hazards

: **Environmentally hazardous substance indication**

ADR/RID/ IMDG-Code/ ICAO-TI/ IATA-DGR: yes / no

Marine pollutant: yes / no

Marking

:



Special precautions for user

: See sections 6-8.

15. REGULATORY INFORMATION

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

EU Legislations:

EC Regulation 1107/2009 of the European Parliament and of the Council of 21 October 2009 concerning the placing of plant protection products and repealing Directives 79/117/EEC and 91/414/EEC
Applicable

REGULATION (EC) No 1272/2008 of the European parliament and of the Council of 16 December 2008 on classification, labelling and packing of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006.
Applicable

REGULATION (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemical Agency, amending Directive 1999/45/EC and repealing Council regulation (EEC) No 793/93 and Commission regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC, including amendments.
No restrictions

National Legislation:

Ordinance on prevention of major accidents involving hazardous substances and limiting their consequences.
Applicable

Ordinance for authorization of plant protection products.
Applicable

Ordinance on procedures for labelling of plant protection products.
Applicable

15.2 Chemical safety assessment : The chemical safety assessment has been carried out for the mixture.

16. OTHER INFORMATION

- (i) **Indication of changes**
The information in this safety data sheet was changed in the following sections:
2 – Hazard Identification
3 – Composition/ Information of ingredients
- (ii) **Abbreviation and acronyms**
None
- (iii) **Key literature references and sources for data**
ECHA Guidance on the compilation of safety data sheets (*version 2.1, February 2014*)
- (iv) **Classification and procedure used to derive the classification for mixtures to Regulation (EC) 1272/2008 [CLP]**

Classification according to Regulation (EC) Nr. 1272/2008	Classification procedure
<i>Aquatic Chronic 2, H411</i>	On basis of test data

- (v) **Hazard categories and H – statements (number and full text) mentioned in the previous sections**

According Regulation (EC) №1272/2008

Aquatic Chronic 3 – Hazardous to the aquatic environment, categories of danger 2 ; H412- *Harmful to aquatic life with long lasting effects*

Aquatic Chronic 2 – Hazardous to the aquatic environment, categories of danger 2 ; H411- *Toxic to aquatic life with long lasting effects*

Skin irrit. 2 – Skin irritation, category of danger 2; H315 – Causes skin irritation

Eye Dam.1 – Eye damage, categories of danger 1; H318 - *Causes serious eye damage*

(vi) **Training advice**
General occupational hygiene training recommended

(vii) **Further information**

THE INFORMATION PRESENTED IN THIS SAFETY DATA SHEET IS BASED ON OUR KNOWLEDGE OF THE PRODUCT AT THE DATE OF ISSUE AND IS INTENDED TO PROVIDE ONLY GENERAL HEALTH AND SAFETY GUIDANCE.

THIS SAFETY DATA SHEET COMPLEMENTS THE TECHNICAL SPECIFICATION / LABEL / LEAFLET OF THE PRODUCT BUT DOES NOT REPLACE THEM.

THE USERS OF THIS PRODUCT SHOULD MAKE THEIR OWN ASSESSMENT OF ITS SUITABILITY FOR THE INTENDED PURPOSES PRIOR TO USE.

NO LIABILITY WILL BE ACCEPTED FOR ANY INJURY, LOSS OR DAMAGE RESULTING FROM ANY FAILURE TO TAKE ACCOUNT OF INFORMATION OR ADVICE CONTAINED IN THIS SAFETY DATA SHEET OR OTHER AVAILABLE TECHNICAL USAGE LITERATURE.